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ORIGINAL LECTURES.

VERSIONS AND FLEXIONS OF THE UNIMPREGNATED UTERUS.

A Course of Lectures delivered before the Boerhaavian Society.

By ELY VAN DE WARKER, M.D.,

OF SYRACUSE, N. Y.; FELLOW OF THE AMERICAN GYNECOLOGICAL SOCIETY.

LECTURE II.

PATHOLOGY.

PATHOLOGICAL conditions are here grouped about the three most marked types of versions and flexions: the developmental, the acquired forms, and these errors as they present themselves at the termination of the menstrual life. These are divisions which are well defined by their pathological traits.

In their pathological relations, versions and flexions are considered together. Many authors hold that the separation of these conditions is unimportant (Goupil, Veit, Martin, Simpson).

Malignant complications are omitted, as having no special value in defining the morbid relations of versions or flexions.

A. Condition of the uterus in the developmental form of versions and flexions.

This form may not necessarily present changes in texture that amount to pathological conditions. Tiedemann found in this form, in several instances, no traces of anomalous or diseased conditions in the structure of the uterus. Scanzoni found, in a young woman, the mucous membrane, the vessels, and connective tissue intact. In its simplest form, this group presents a diminutive size of the body and cervix, without change in the textural elements of the organ. In connection with atrophy of the uterus, an arrest in the development of the ovaries and tubes has been observed (Breschet). Hueter endeavors to explain this arrest of development by assuming that there is such a defect in blood supply by change in the position of the broad ligaments, that circulation in the body of the uterus is retarded, and growth consequently arrested. The error in position and the atrophy become, under this view, mutually re-active to perpetuate the flexion. This theory receives some support by the specimens noted by Tiedemann and Jahn, of lateral or oblique flexion, in which the affected side, contrasted with the other, appeared defective in its evolution, both in length and mass, the tube upon the flexed side being also situated lower than the opposite one. This explanation fails when we consider those cases in which the uterus and its annexes exhibit the same degree of defective evolution.

The distinction between atrophy and arrest of growth in normal evolution must be observed. The term atrophy, when properly used, infers a diminished size from a previous state of normal development. In the conditions just described, atrophy does not exist, the normal size in formative evolution never having been

reached. Here the flexion and the associated defective size are co-results of common causes.

Atrophy, however, plays an important rôle in the pathology of the developmental flexions. We may properly apply the term to those forms of the uterus observed by Martin and Hueter, in which ante- and retroflexion in young women and sterile wives were found associated with a very slightly developed and exceedingly movable cervix uteri. The assumption is more natural that these were cases of atrophy rather than of asymmetry of development. Rokitsky and Klob have observed the smallness and flexibility of the cervix in multiparæ and sterile women, connected with unequal thickness of the walls of the uterine body, and which these authors regard as true atrophy; as is proved by the observation in a case of ante- and retroflexion, in which the posterior wall, by its excess in thickness over the anterior, tended to perpetuate the flexion. Sommer found in the cadaver an ante- and retroflexed uterus less than two inches long, and atrophied to such a degree that a small probe could not be passed, except by force, through the canal of the cervix. Jahn notes like cases. Atrophy has in some instances become extreme. Mende notices a case of flexion observed in a young woman, in which the uterus was wholly atrophied. Dance observed a case of retroflexion in which the cavity of the organ was considerably enlarged toward the fundus, while the walls were very thin. Instances of eccentric atrophy, such as this, are of rare occurrence, except as a result of senile atrophic processes.

B. The term acquired—used to define a group of flexions or versions, implies an antecedent normal condition of development, form, and position. It is admitted by all authors of repute, Sommer alone excepted, that flexions due to the formative period of sexual life are defined from those due to other causes by faulty or asymmetrical development. The causes are here coincident with the forces of sexual evolution.

The division of the acquired forms into ante- and retroversion and flexion is deemed unimportant in a review of the pathological conditions (Duval).

Pathological phenomena will be arranged under three divisions:

a. Condition of the uterine parenchyma.

b. Changes in the uterine cavity.

c. Condition of near parts.

a. In recent cases, changes in the uterine texture are not always observed. This is undoubtedly true of all cases of versions. If we regard a condition of version as (Emmet) primary to that of flexion, the former becomes the initial change—a pathological point of departure in uterine tissue-changes. A condition already referred to, under its normal and etiological relations, is the theory of Rokitsky of the submucous connective tissue, which that author believes to be the supporting framework of the uterus. This layer of firm connective filaments is supposed to lose its sustaining power, and thus allow the organ to fold upon itself

While it cannot be denied that this layer suffers in the general impairment of the uterus necessary to the existence of a flexion, yet that the initial pathological lesion is confined to this tissue, to the exclusion of the uterine parenchyma as a whole, must be objected to. If the uterus, from a fresh cadaver, is pared of its mucous and connective-tissue lining, it loses but little of its resistance and elasticity, which seem to reside in the firm and dense muscular tissue of the organ. Catarrhal states of the uterine mucous membrane; which hold an important etiological relation to flexions and versions, cause a looseness and softness of the connective-tissue layer; this is not, however, any more marked than tissue-changes throughout the organ. In an endeavor to deal with facts, Rokitsky's theory must be excluded.

A condition found nearly as constantly in acquired flexions as atrophy is in the developmental, is an enlargement of the organ. In multiparæ, Hueter remarks that a hypertrophy of the organ connected with a flexion characterizes the acquired form. This hypertrophy is generally associated with serious changes in the muscular substance of the uterine walls. Martin has noticed cases in which the parenchyma was so relaxed that the organ would bend upon itself, first in ante-flexion and then in retroflexion. The antithesis of this condition is observed in those cases in which the uterine tissue is so firm that on replacing the organ it would instantly recoil to its flexed position. Relaxation of uterine tissue is not always general. The point at which this is most frequently observed is at the os internum. In the normal organ, this is the weakest part of its walls. Here the displacing forces exert the greatest strain—a sort of fulcrum upon which these forces exert their leverage. Relaxation of the walls at this point is of great pathological value in connection with rapidly acting causes. In cases of flexion following abortion or lying-in, the uterus is found enlarged, its walls softened, the cavity extended, the mucous membrane denuded—even the muscular substance laid bare; while the fatty metamorphosis and involution of the organ are in abeyance. Guérin states that where abortions hold this etiological relation to flexion, inflammation is the direct cause of changes in the parenchyma, or of arrest in the physiological restitution of the organ. But, in cases in which the inflammatory process has a narrower field—as in the non-puerperal uterus—it is a very constant condition. It is rare to find a case of acquired flexion in which the body of the uterus is not sensitive to the touch, be the wall hypertrophied or condensed. Kiwisch and Martin have found these displacements associated with endometritis quite generally. This is commonly found connected with the corporeal tenderness. Israel states that the origin of this inflammatory condition is to be sought in lesions after abortion or labor, or in circumscribed inflammations either in the uterus itself, or through the transplantation of the inflammation from the vagina to the neck. After such inflammatory processes, cicatricial thickening, with shortening in isolated groups of muscle-fibre, is observed; so that the opinion seems justifiable that, as in other organs in this condition deformities are produced, so in the uterus the same consequences may be anticipated. Guérin supports this theory by stating that from inflammation and resulting shortening of muscle-fascia, a permanent deformity may be caused.

Dr. Squarey believes that in the acute flexions, so called, the uterus gradually falls over into a flexed or verted position, owing to loss of tone in its tissues, the organ being too weak to uphold the fundus. There is no necessity to ascribe its position to pressure from above; the organ once being flexed, its size and atony are sufficient to keep the uterus in its abnormal position mechanically. In the fatal case of ante-flexion of Dr. Walshe, recorded by Ashwell, the post-mortem examination showed the uterus soft, flabby, and yielding at the angle of flexion; the anterior and posterior walls were one inch thick. This accords with Hueter's idea of the walls in inflammatory hypertrophy. Rockwitz has noticed a similar condition in flexions following parturition. As already noticed in the lecture on etiology, Martin has traced various pathological conditions of the walls of the uterus leading to ante- and retro-flexion, to subinvolution of the placental site. In these cases the inflammatory processes play an important part. The walls of the organ at the seat of placental insertion are thickened, spongy, and yielding; but it is necessary to conceive of the uterus generally having more or less of the same character, less, possibly, the thickening of a circumscribed area, in order to understand the manner in which a flexion could be a primary result. In these cases, if the relaxation of the organ is limited to a particular spot, flexion is preceded by version, the former supervening on a progressive impairment of the sustaining power of the uterine parenchyma. Notwithstanding the well-known ability of Martin as an observer, the matter is somewhat open to doubt, that the seat of the placenta, retaining, as it must, a lingering involution process under even normal conditions, has less to do with the production of flexion than a general impairment of the resisting power of the uterus. Many facts may be adduced to prove that the impaired tone of the uterus is general rather than confined to a single point. In old cases the submucous connective tissue at the os internum shows a marked degree of relaxation, but the whole uterine parenchyma is softer and less elastic, which is simply in a more evident condition at the flexed point. At this point yellow spots of fatty degeneration have been observed (Scanzoni, Tilt, Hodge). Hewitt has observed a loss of resistance and softness of the whole uterus in women who have suffered from chronic nutritive disturbance, leading to a pliability that results in flexion. In slight general relaxation of the walls of the uterus the encurvature shows itself as a folding or angular notch in the wall involved. Sommer has ventured the opinion that a pathological element of flexions is connected with a rheumatic condition of the uterine wall—a muscular rheumatism, in fact, which, in the absence of any demonstration that the muscular texture of the uterus is susceptible to the rheumatic inflammation, must be classed with the theory of another German writer that flexion is sometimes due to a condition of cramp or tonic spasm of the muscular fibres of the flexed wall. Connected with the hypertrophy of the uterus, Israel describes a condition of oedema of the walls which he ascribes to a condition of venous stasis of the parenchyma (Stauungshyperämie). The same condition he has noticed in versions, especially in a high degree of the displacement backwards, in which the fundus of the uterus, by pressing upon the venous plexus upon the posterior pelvic wall, caused an oedema

of the lower uterine segment. It is doubtful if veins situated upon the posterior pelvic wall have a sufficiently close connection with the venous system of the uterus to cause a blood stasis and serum exudation into the connective tissue of the organ. It is probable that the observer mistook the softened hypertrophy of the neck for a state of oedema.

The hypertrophy of the uterus has two relations to the flexion and version of the organ, namely, an inflammatory hypertrophy, which holds a causative relation to the flexion, or is either developed, intensified, or perpetuated by the venous hyperæmia caused by the obstruction to the return of blood at the point of flexion (Hueter). But the venous stasis may be due to a more widely prevailing cause. According to Klob, the current of blood out of the uterine veins to the vena hypogastrica is interrupted, and, in consequence, the collateral hyperæmia produces oftentimes a considerable expansion of the plexus pampiniformis, since the blood cannot all flow through the spermatic vein. While this interruption of the circulation is of importance to the organs which lie near the uterus, yet the direct effect is more disastrous to the parenchyma of the uterus. In the first condition, that of stasis due to the angle of flexion, the uterine segment below the angle was the chief seat of venous hyperæmia, since the uterine cervix and body have, in a measure, separate or supplemental avenues of blood-escape. In the hyperæmia caused by tension of the broad ligaments and the connective-tissue supports of the uterus, the hyperæmia is general throughout the organ. While the uterus may suffer generally through its mass from the evil effects of the impeded circulation, yet the permanent result is not equally distributed through both walls. The flexed wall at the angle of displacement remains either stationary in thickness or slowly atrophies, while the opposite wall and the fundus undergo an interstitial hyperplasia that renders the displacement of the organ permanent.

Scanzoni graphically describes the condition of the uterine parenchyma and cavity. On section of the uterine walls, a livid and, many times, a dark-green color is observed, a condition which permits the conclusion that the interior of the uterine walls is in a state of chronic stasis and associated always with a more or less considerable volume and increase in the weight of the uterine body. Depending on the duration of the displacement, the walls of the uterus may be found either thick, stiff, and resistant, or the opposite—elastic, yielding, and loose, with the vessels turgid with blood; briefly, it shows the different stages in the development of tissue-changes in the so-called chronic corporeal metritis. The cavity of the uterus appears generally considerably enlarged; oftentimes it is filled with water-like, thin-flowing fluid, or a somewhat viscid, yellow or bloody mucus is observed. The contents of the organ are explained by Scanzoni as depending on catarrhal hypersecretion of the mucous membrane, and partly, that at the point of flexion the contact of the anterior and posterior walls of the cervix causes an arcuation of the canal, and prevents or retards the escape of the uterine secretion.

Hewitt and others speak of a marked induration, without atrophy, associated with chronic flexion. In this condition of the walls of the organ there is marked resistance to the replacement of the uterus by the

sound, and the part quickly recoils to its dislocated position on the withdrawal of the replacing force. The indurated wall seems built up of hyperplastic tissue in its position of flexion, and thus resists powerfully any attempt to straighten or replace the uterus.

Rokitansky first called attention to the fact that in old women who have suffered for a long time with flexion, and who have borne many children, there is found, in the anterior periphery of the os internum, and embedded in the uterine substance, a large vein. Klob notices an instance in which this vein was 1.5 line in diameter. Martin explains this venous dilatation by the compression of the uterine vessels, resulting in increased blood pressure. This explanation removes this condition from its etiological relations, and places it among the results of long-continued flexion in an organ previously over-burdened by an excess of functional activity. Hueter, however, fancies that its relation to flexions is etiological, and by means of which the uterine parenchyma is compressed, and the uterus thus more easily flexed.

Atrophy, like hypertrophy, may not be a result of flexion or version long delayed. Martin speaks of it as one of the changes that take place rapidly, but mentions it as connected with a condensation of uterine tissue. This condensation is as frequently observed above as below the seat of the flexion. Without any attempt at explanation, Martin asserts that this condensation is observed above the seat of flexion, generally as a result of defective involution of the placental site after parturition with a flexion existing. That Martin makes any distinction between atrophy and condensation is disproved by a remark in the context of the above, in which he states that similar conditions are found below the point of flexion, although "it by no means always follows that the cervix is swollen; on the contrary, it is often flattened or compressed." The lower portion of the uterine neck is often considerably compressed and now and then elongated, particularly in cases in which granular erosion is at the same time existing (Huguier). The point of flexion in most cases does not always show tissue-changes; but, in cases of longer standing, the walls at this point become atrophied and show well-marked cells. In young women suffering from flexion while the muscular tissue, the vessels, and connective tissue appeared wholly intact, yet fatty particles were observed on a cross-section (Robin, Scanzoni, Virchow). Changes occur very early at the point of flexion in which the mucous membrane, apparently from compression, becomes white and fibrous, and the os internum surrounded with small cystic follicles at those points where the mucous membrane remained unconverted (Virchow, Martin). Hewitt regards atrophy at the seat of the flexion as a result rather than a cause of the uterine malformation. According to Virchow, the point of flexion on the wall involved becomes more atrophied as the muscular tissue disappears, until not a sign of connective tissue remains. Tilt states that the uterine parenchyma at the inner os becomes atrophied to a fold in old cases of flexion. West and Dumpe have verified the atrophy of the flexed point of the uterine wall, and the consequent shortening of that side of the organ. Rokitansky has noticed a growing together of the uterine cavity at the angle of flexion, associated with a scar-like contraction of the connective-tissue structure.

As a prelude to this adhesion, we have a close contact of the mucous surfaces at the seat of flexion intensified by the gradual atrophy of the uterine walls, by means of which adhesive inflammatory action is induced. Scanzoni found in the highly atrophied uterus of a young woman, who had never menstruated, an atresia at the seat of flexion. In one case the same observer found a stenosis, in consequence of which the region of the os internum was so narrowed that it was only by the employment of considerable force that a small silver sound could be introduced. So far as known, all cases of atresia and stenosis of the uterine canal at the flexed point are associated with atrophy and condensation of the uterus generally.

Scanzoni states that he has found the uterus at, and in the near neighborhood of, the flexion generally flattened antero-posteriorly. Virchow has noticed the same condition extending throughout the uterine neck. His explanation that this is due to pressure of the rectum distended by feces is hardly sufficient. If this were so, the condition is one that ought to be very commonly observed, instead of being usually associated with flexion. It is more rationally explained as the result of tissue-changes due to the embarrassed circulation of the organ, in which the resultant atrophy assumes an antero-posterior symmetry, the organ being originally flattened in that direction at the angle of flexion.

The condition of the vaginal portion of the cervix in versions and flexions gives rise to some difference of opinion. Martin states that from the flattening of the cervix, already described, the os externum becomes obstructed. So extreme may this become, that by preventing the escape of mucus from the canal of the neck that cavity may undergo a sack-like enlargement (Hueter). The condition of the os externum is usually described as patulous. This is supposed to be characteristic of the state of the uterine mouth in flexions. Scanzoni states that he has found the external os considerably open in those who have never borne children. Hueter says that he has been unable to make a verification of this. He has never found the os externum patulous except in multiparæ. Scanzoni explains this condition of the external orifice by the theory that the posterior wall in antelexions, and the anterior wall in retroflexions, while enlarged and heavy, exert a traction over the cervix and draw the external mouth open. It is difficult to conceive of the cervical wall exerting any such power over the circular fibres of the external opening. Hueter's objection to the theory of Scanzoni, that the anterior and posterior lips are of equal thickness, does not always hold true. It is not unusual to find that in retroflexion the anterior lip and in antelexion the posterior differ widely in thickness; this is a condition that typifies the atrophied state of the wall involved in the flexion. We may premise that this patulous state of the external opening is a characteristic of the acquired flexion, and never met with, except in the most exceptional way, in the developmental flexion. It is not a condition of atrophy, either general or partial, of the uterine walls. It may be explained by known conditions of the walls in acquired flexions. The patulous state of the os externum is rationally explained by, first, a general or partial relaxation of the muscular fibres; by interstitial hyperplasia of the labium of the uninvolved wall, in which the enlarged and relaxed

parts find space for development by an increase of the periphery of the os externum; by an irregular fatty degeneration of isolated bundles of longitudinal muscle-fibres. The relaxation of the circular fibres of the vaginal portion of the cervix is sometimes nearly complete, as in the condition of ectropium (Roser) of the os, in which the mucous membrane of the cervical canal seems to be continuous with that of the vagina. A parturient accident that is very common, a laceration of one or both lateral walls of the vaginal portion of the cervix, is often found associated with flexions (generally retroflexion), and in this state of the cervix a more or less complete eversion of the external opening is observed.

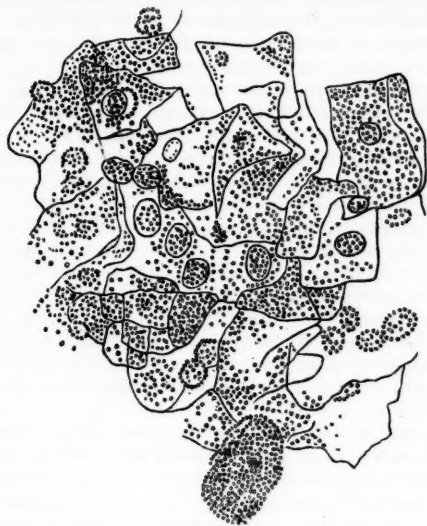
The margins of the os externum are often in a state of granular ulceration (Heywood Smith). Papillary hypertrophy, and occasionally deep corroding ulcers, have been observed (Scanzoni, Rockwitz).

6. The condition of the uterine cavity in flexions and versions presents many uniformities. One of the most common conditions is that of catarrh of the mucous membrane. Seyfert has stated that he rarely observed a catarrhal state of the uterine lining in the dead subject (Hueter); but many of the minute pathological changes, that in the living might be expressed by hypersecretion, could easily escape detection in the cadaver. Rokitansky, as has been already noticed, regards a catarrhal condition as etiological, while Klob states that it may not always be a condition primary to the flexion. The following considerations render the idea of Klob a rational one. The catarrh may exist as an accumulation in the cavity of the organ, and as such may antedate the flexion; or, the catarrh not existing as a hypersecretion, but in consequence of pressure on the inner os, or from distortion of the uterine connection with the neighboring parts, causing a passive hyperæmia in the flexed part, which must develop a hypersecretion of the mucous membrane, and in both cases cause an expansion of the cavity.

An examination of the secretion of the uterine cavity is confirmative of the latter of the above conditions. The increased secretion is frequently observed to excoriate the vaginal portion of the uterus and the vulva, and sometimes quite a degree of vaginitis is noticed. An examination of the uterine secretion, taken from the os externum, under the microscope, shows a predominance of pavement epithelium in different degrees of degeneration, a fact which proves that the greater part of the discharge comes from the lower part of the uterine canal. Normal cells were rarely observed; the majority of the cells were in a more or less advanced stage of fatty degeneration, with granular particles interspersed. In many the cell membrane had vanished, leaving granular masses, in which the original contour of the cells was preserved. Among these elements cell nuclei, also in a state of degeneration, were observed, as well as pus cells and the débris of granular erosion of the os externum. The following figure, copied from one in Beizel's *Die Krankheiten des Weiblichen Geschlechts*, Bd. ii. p. 209, represents the discharge removed from the os externum of a retroflexed uterus.

Martin states that it is not rare to find in the tract of a flexion traces of recent or chronic inflammation of the mucous lining, such as red, rounded, or flattened granulations, which obstruct the opening of the os internum.

Friable and granular swelling of the mucous membrane may be seen throughout the cervical canal. As a result of the hypersecretion of the mucous follicles, their cavities become disintegrated and undergo a cystic



generation—the so-called ovula Nabothi. These morbid processes in the mucous lining, added to contraction and compression at the seat of the stricture, occasionally result in such a contraction of the lumen of the canal that retention of menstrual discharge, mucus, and pus occurs. From this cause the uterine cavity has been observed enlarged (Hewitt). Scanzoni found, in a woman thirty years old, who had suffered from flexion, about two ounces of fluid and coagulated blood. Virchow has observed the mucous membrane, at the seat of flexion, degenerated into a white, fibrous layer, and the internal orifice surrounded with small cystic follicles. Martin has seen such a condition extending 2 cm. above and below the flexed point. This destruction is not limited to the mucous membrane, but the submucous connective-tissue stroma is sometimes exhausted (Rokitansky). In attempts to repair these lesions star-like contractions result.

These pathological changes are confined, in a great measure, to the acquired forms of flexion. In the developmental versions and flexions when pathological conditions, such as are here described, occur, they are generally sequelæ, and not primary to the uterine displacement. When these are observed in connection with the last-named group of flexions, the causative relation may be traced to retarded circulation and resulting hypostasis. In fact, many of the pathological phenomena described may be deemed sequelæ of flexions in general rather than antecedent conditions. The evidence that suggests this may be found in the fact, that acquired retroflexion is rare in nulliparæ, occurring only when, by reason of long-continued catarrh, the uterine texture has lost its resistance; anteversion takes place with an abnormally dense and swollen uterus, the antithesis of the former, while ante-flexion occurs in multiparæ oftentimes with an absence of any marked pathological changes (Schroeder).

c. The conditions of near parts in cases of versions and flexions of the uterus are of great interest. Flexions are rarely found except in connection with other changes which are present, either in the ligaments, connective tissue, and vessels, or in the vagina, bladder, and rectum.

Pathological conditions of the ligaments of the uterus were described in the lecture on etiology; yet, these frequently bear a secondary relation to the change in position. An ante-flexion associated with inflammatory shrinking of the lig. sacro-uterina might justly be assumed to be a result of the displacement, while the same condition in a retroposition of the uterus, with retroversion or flexion, could with equal justice be regarded as causative. The outer surfaces of the versed or flexed uterus are frequently the site of membranous exudations binding the uterus to its neighboring parts—the bladder or the rectum—and which are, without doubt, produced after the faulty position of the uterus was assumed. Martin describes a case which clearly shows this; in this example the posterior surface of the uterine body and the fundus were bound to the sacrum by pseudo-membrane, but also the forward wall of the uterus sent out membranous fibres to the bladder in front, and laterally to the lumbar vertebra. In other cases the remains of old inflammatory exudations and cicatricial swellings are found upon the peritoneum which covers the uterus. Martin coincides with Virchow in the opinion that the shrinkage of these pseudo-membranous fibres causes version of an otherwise healthy uterus, flexion being produced afterwards as the result of impairment of the uterine parenchyma.

What Martin regards as a rare complication of flexions is an approach and fixation of the isthmus uteri to the pubes, and which, he believes, depends upon a contraction of pubo-vesico-uterine ligaments. This shortening may depend upon either a pericystitis or a parametritis-coli, or on a resorption or suppuration of a hæmatoma. This observer has noticed an inclination of a flexed uterus to one side, due to the development of cysts or tumors in the tube or ovary, and to which the uterus has either contracted adhesions or been drawn from its median position by a shortening of the ligamentum ovarii. Generally, however, the inflammation and subsequent contraction of the exudate has been detected in the broad ligament, and the result is a latero-version with a retroflexion or version. Frequently versions and flexions are found connected with tumors either in the uterine wall or in near parts, the connection of which, by adhesive inflammation, is evident.

From pressure of the displaced fundus uteri, and from drawing or stretching of the peritoneum covering the uterus and near parts, slight local peritonitis is produced, with its attendant pseudo-membranous adhesions. Hueter states that it is not rare to find in the depths and expansions of the vesico- and recto-uterine folds traces of a previous inflammation in the shape of partially organized exudation masses of an elastic feel, livid, and sometimes of a dark-green color. Rockwitz says that he has found these adhesions so elastic that after the uterus was replaced the organ would recoil back to its original position of displacement with an evident jerk.

Now and then flexions or versions may be found associated with right or left latero-version, caused by

shrinking of cellular tissue after inflammation and abscess. These pathological conditions have already been referred to in the lecture on etiology. Ludwig Joseph has reached the following generalization concerning the connection of the pathological conditions of near parts and of the uterine parenchyma with the different forms of flexion; thus, ante- or retroflexion, when not developmental, is frequently associated with perimetritic adhesions, while retroflexions depend generally upon relaxation of the uterine substance in consequence of defective puerperal involution.

The position of the rectum to the left has an influence on the direction of retroflexion. Klob has explained the general reflection of the uterus to the left in this displacement by an unequal length of the round ligaments; but Hueter advances the idea that during violent efforts at defecation the expulsive efforts of the abdominal muscles are concentrated around the rectum to the left, the uterus being also affected, undergoes a slight torsion movement in that direction.

The interruption of a free circulation through the pelvic venous system in versions and flexions is of importance to organs near the uterus. Varicose enlargements have been found in the hemorrhoidal and vesical veins, resulting in chronic catarrh of the rectum, bladder, and urethral mucous membrane. Hyperæmia and œdema of the ovaries have been observed (Klob). Chronic oöphoritis has been found associated with uterine flexions (C. Mayer, Hensley, Martin).

In long-standing cases of version and flexion the neighboring peritoneal pouches suffer essential changes, particularly the vesico-uterine and the recto-uterine folds. A case has been observed in which the uterus was pressed through the posterior vaginal wall as a hernia vaginalis (Martin). Manuel describes two cases of retroflexed uteri lying in the prolapsed recta; and another case in which the retroflexed organ had formed adhesions with the perforated rectal walls (Rokitansky). Hueter refers to a case in which retroflexion existed to such a high degree that the posterior vaginal wall was protruded into an invagination of the anterior rectal wall, and this, containing the uterus in a relaxed condition, was found out of the anus. A remarkable case of prolapsus uteri, complicated with retroflexion, has been recorded by Schott, in which there was perforation of the vagina at the posterior cul-de-sac (Hueter). Freund reports two cases of retroflexion of the uterus, in which the cervix passing upward compressed the ureters, and thus induced hydronephrosis. Bamburger reported a case that may help to clear up any error in observation on the part of Freund; this related to a retroflexed pregnant uterus at the fifth month, in which the organ compressed the ureters, and a fatal state of uremia ensued. Hueter believes that a considerable stretching of the uterine connections may lead to this pathological state.

c. Condition of the flexed or versed uterus at the climacteric period.

With the discontinuance of the menstrual process the blood-turgescence, which had been a leading trait of functional uterine life, vanishes, and with it a diminished supply of blood to the uterus. The result is a gradual atrophic condition of the parenchyma of the organ. So long as the external or internal os remains pervious the atrophy is concentric, that is, the uterus and its cavity

appear proportionately reduced in size (Hueter). A continuance of the atrophic process may be observed in the muscular substratum, which appears thinner and more yielding. Senile marasmus, according to Klob, is total, the uterus is very small, ante- or retroflexed, and is oftentimes rough and granular to the touch. In the annexes the arteries may be seen in many places small and serpentine in their distribution. The subperitoneal arteries of the uterus become stiff and convoluted, and project upon the surface in hard prominences. On section the substance of the uterus appears pale-green or dark-red, and on a cross-section the stumps of arteries project as small, white points, thickened in their walls, and often calcareous. The mucous membrane is loose, thin, white, or in a condition of so-called atrophy of a deep-red color, which sometimes pervades the parenchyma. At other times it is seen studded with small cysts; and again, it is reduced down to a serous, shining stratum of connective tissue (Hueter).

The vaginal portion appears small and short, and even wholly disappears, so that upon the vaginal vault small folds reveal the external opening of the cervical canal.

Frequently the atrophy of the uterus exists in connection with fibroids, and in a few of these cases the place of the uterus is found occupied by the convolutions of a rounded, fibrous mass, and among them scarcely a trace of the muscular tissue of the uterus is to be found. The cavity has been observed to be wholly wanting, or is represented by a small cavity, found somewhere among the convolutions, filled with gelatinous mucus. The cervix may be normal or elongated. In the case of fibroids with calcareous degeneration, the uterus has been observed to be atrophied to a thin skin-like framework (Hueter).

When a condition of stenosis or atresia exists at the inner os, senile atrophy is eccentric, that is, the cavity of the uterus becomes enlarged and its walls thin. In this condition of the os internum the secretion of the uterus is either retained or obstructed in its discharge, and leads to a condition of hydrometra.

The stenosis or atresia of the inner os is oftentimes the result of mechanical causes, such as that due to close contact of the mucous surfaces at the point of flexion. Such a case is reported by Kiwisch, and observed by him in the cadaver. Virchow notes a case somewhat similar, in which an organic stricture existed at the os internum, as the result of inflammatory thickening of the mucous membrane (Hueter). According to Scanzoni, atresia at the internal orifice in flexions may be caused by senile atrophy or shrinking of the connective tissue, or in consequence of chronic catarrhal inflammation accompanied by erosion of the epithelium of the mucous membrane of the cervical cavity, so that complete adhesion of the surfaces in contact occurs. Scanzoni found, at the post-mortem examination of two old women, a high degree of flexion, accompanied by complete atresia at the point of flexion. One of these cases showed eccentric atrophy; the other, observed in a woman over seventy years of age, the quantity of accumulated mucus in the cavity of the uterus exceeded half an ounce.

The advance of senile atrophy is favored by the presence of chronic catarrhal inflammation. In consequence of this, mucous or cystic polypi may be found

combined. Atrophy of the uterus has been noticed associated with that of the ovaries (Hueter). Klob states that in senile atrophy, with incomplete atresia, it is not unusual to find the uterine cavity enlarged to the size of a hazel-nut, and filled with a glue-like mucus. This is an instance of eccentric atrophy of the uterus, due to defective power of contractility in the uterine walls.

Atrophy of the walls of the organ result in consequence of the enlargement of the cavity through the accumulation of mucus, which is sometimes considerable. Kiwisch reported a case in which the uterine cavity contained two pounds of fluid. In considerable enlargement of the cavity the mucous membrane becomes thin and degenerated. Its soft, velvet-like feel is lost, and the membrane assumes the smooth and shining appearance of a serous coat. In the larger expansions of the cavity the mucous membrane is of a reticular structure at times, or is now and then reduced to a lamella of connective tissue, covered on its inner surface with cylindrical epithelium, which has, in nearly all cases, lost its cilia (Hueter). The glands of the mucous membrane are diseased from the beginning of hydrometra, with fatty degeneration of their epithelium, and end by producing gaps in the mucous lining of the organ. Cystic degeneration of the utricular glands has been noticed.

ORIGINAL ARTICLES.

ON THE PROGNOSTIC VALUE OF THE LOCAL MANIFESTATIONS OBSERVED IN TUBERCULOSIS OF THE LARYNX.¹

BY J. SOLIS COHEN, M.D.,
OF PHILADELPHIA.

As the duration of chronic tuberculosis of the larynx varies within limits extending from six months or thereabouts to as many years or more, it would be desirable to ascertain whether there are not some lessons to be learned from its laryngoscopic study which will enable us to predict, with some degree of assurance, the probable period to which, in any individual instance, life may be prolonged. This is the inquiry proposed to the Section in this communication.

While it may be admitted that recovery takes place in some instances of tuberculous laryngitis, it remains doubtful whether there are any characteristic laryngoscopic manifestations which justify the prediction.

Those cases which have been shortest in their career, have appeared to me to have accompanied cases of pulmonary tuberculosis in which caseation has taken place rapidly. Although both the functional and the physical symptoms have sometimes become manifest in the larynx some weeks or some months before they have been detected in the lungs, there has been no reason to doubt that the involvement of the larynx has actually been secondary. The patients have lived for periods varying from

six to eighteen months after the first onset of laryngeal symptoms.

The earliest laryngoscopic picture is one of congestive catarrhal laryngitis merely. Essentially uninfluenced by treatment, the picture commences to change in the course of a few weeks by the addition of one or more series of minute ulcerations of the mucous membrane; their site being upon the posterior surface of the upper portion of the epiglottis far more frequently than in any other locality. As the case is examined from day to day, or at intervals of a few days, it is seen that these ulcerations gradually extend in depth and in periphery; and when they are close together, two or more of them will coalesce. There is no pus on their surface. In some cases gradual intumescence of the epiglottis takes place, and in many of these instances similar swelling of the ventricular bands and of the vocal bands follow. In a few of them the same sort of swelling is seen to be going on in the interarytenoidal and in the aryteno-epiglottic folds. While the swelling is progressing, the ulceration continues to spread, so that the internal surface of the larynx may be eventually mapped out by irregular ragged ulcers, in some instances involving almost the entire circumference. This ulceration being in part suppurative, pus may be seen upon the surface. Excessive granulations, presenting the aspect of independent neoplasms, are sometimes developed around the edges and beds of some of these ulcers. Destructive ulceration of the epiglottis ensues in some instances, usually from above downwards, but exceptionally from the side toward the centre.

The prognostic differentiation of this series of pictures is indicated chiefly by the initial hyperæmia, the multiple ulcerations, upon the epiglottis especially, and the tumefaction in the anterior portions of the larynx, followed by progressive ulceration both tuberculous and suppurative. Ulceration limited to the epiglottis indicates unusual rapidity in the course of the disease. Ulceration limited to the interior indicates a more sluggish course. The rapidity with which the ulceration extends influences the prognosis proportionally.

A second series of cases live from two to four or more years after the involvement of the larynx. They appear to me to be cases of sluggish tuberculosis of the lung which has begun in localized pneumonitis. The involvement of the larynx does not take place until the disease has made considerable progress in the lung, often not until softening has occurred, or is about to begin.

The earliest characteristic laryngoscopic picture of these cases is one of pallid mucous membrane, in marked contrast to the congested mucous membrane of the first series. There are no early minute ulcerations as in the other series. As the larynx is inspected from time to time, its features are seen to be losing their marked outlines and to become more and more tumid. The sharp borders of the aryteno-epiglottic folds, of the edges of the ventricular bands and of the vocal bands, are seen to become thickened; and circumscribed tumefactions take place at those portions most abundantly sup-

¹ Read for Dr. Cohen before the Laryngological Section of the International Medical Congress, Copenhagen, August, 1884.

plied with lymphoid cells. This tumefaction is most frequent and most constant over the supra-arytenoid cartilages and within the aryteno-epiglottic folds. In many instances, however, it takes place within the interarytenoid fold, and in some instances in the epiglottis. The peculiar outlines of the supra-arytenoid cartilages become lost in the well-recognized characteristic pyriform tumefactions which taper along the aryteno-epiglottic folds, toward the epiglottis; while obliteration ensues of all lines of demarcation between the folds proper and the outlines of the cartilages. The tumefaction in the interarytenoid fold is usually diffuse; sometimes it is in a single hemispheroidal mass; less frequently it is acuminate; in either instance preventing approximation of the vocal bands.

In some instances the epiglottis becomes thickened to several times its normal dimensions, so that it fails to occlude the larynx in deglutition. Collateral oedema sometimes adds to the tumefaction in the aryteno-epiglottic folds and to that in the epiglottis. These tumefactions may continue, to the end, the sole laryngoscopic manifestations. In advanced cases, however, ulcerative processes, sometimes extensive, often take place in almost any portion of the interior of the larynx; even in those rare instances of subsidence of the pyriform swellings. When located posteriorly, they are indicative of a prolongation of the process. Occasionally, indeed, ulcerations of limited extent cicatrize temporarily or permanently, life remaining prolonged for several years.

The chief prognostic differentiation of this more prolonged form of the disease, resides in the pallor of the mucous membrane, and the subsequent circumscribed tumefactions at the posterior portion of the larynx.

It would be superfluous before this assemblage to detail the entire physical history of a tuberculous larynx. Without having anything new to offer, the object has been to invite a discussion as to whether the indications alluded to, or any others, are sufficiently distinctive to justify the predication of a prognosis as to the probable tenure of life in the early stages of any given case of tuberculous laryngitis; and whether the shortening of life in the first group of cases is simply due to innutrition following the dysphagia attendant upon disease of the epiglottis and the superior margin of the larynx, irrespective of the march and situation of the tuberculous processes. Reliable answers to questions as to the probable length of life in tuberculous laryngitis may be of great importance to the patient and to his family.

A STUDY OF INEBRIETY COMING FROM INJURIES OF THE HEAD AND BODY.¹

BY T. D. CROTHERS, M.D.,
SUPERINTENDENT OF WALNUT LODGE, HARTFORD, CONN.

THE fact has only recently been recognized that injuries of the head and body are not unfrequently followed by profound and excessive use of alcohol. An

outline history of such cases may be stated as follows: Persons who are previously temperate, or, if not total abstainers, are only moderate or occasional drinkers, will suffer from injury to the head, generally blows, fractures, concussions, or fracture of other bones of the body, contusions, wounds, or hemorrhage, and from this event, or immediately following convalescence, will begin to use opium or alcohol to great excess, falling rapidly into chronic conditions. Such persons are unable to give any reasons for their drinking, other than that they need spirits, and rarely ever make any effort to recover. A state of general paralysis of the will, and hopeless melancholy of the future, appears in most cases. In some cases spasmodic endeavors to be temperate are made, but generally fail, leaving the victim more prostrated and helpless than before. In some cases acute mania appears and they are placed in insane asylums, from which partial recovery follows, but from the time of discharge they relapse, using more spirits than ever. Dementia, general paralysis, or some acute disease soon follows, terminating in death.

In other cases a temporary subsidence of the drink-craving is marked by a total change of character and motive. Criminal and pauper tendencies come out prominently, and a disregard of duty and obligations to others, and a disposition to extreme selfishness and secretiveness, take the place of former opposite traits of character. Many such cases appear in courts, and the impression of the judge and jury is that their previous good conduct makes the present state more culpable and heinous. Both in jail and in insane asylums the so-called moral state of the victim obscures every other condition, and rarely, if ever, is any study made of his case. *The frequency of these cases can only be determined approximately, because no study of them has been made.* Dr. L. D. Mason, of the Inebriates' Home at Fort Hamilton, New York, in a general etiological study of six hundred cases, under treatment at that asylum, found that sixteen per cent. came directly from head injuries. Dr. Day, of Boston, in a study of two thousand cases under his care at the Washingtonian Home, found twenty per cent. traceable directly to injury of both head and body. In a history of over four hundred cases under treatment at Binghamton, New York, and at Walnut Lodge, in Hartford, Conn., which I have obtained, nineteen per cent. were clearly due to traumatism. This does not include those obscure cases of psychical traumatism which I have studied in detail, and published in the *Journal of Mental and Nervous Diseases*, and elsewhere, the frequency of which is not yet ascertained. So far, these are the only facts from which to infer the percentage of cases from this cause, that I am aware of.

This effort to trace some of the facts concerning the influence of traumatism as a cause of inebriety, I believe to be the first in literature. Forbes, Winslow, Bucknill, Maudsley, Brown, Watson, and many other eminent English authorities have mentioned such cases, and several continental writers have described them in connection with some form of insanity. But the general recognition of inebriety in medical literature is so vague and uncertain, that these cases have attracted no attention.

¹ Read at the Annual Meeting of the Association for the Cure of Inebriates, at New York City, 1884.

I propose to group some of the facts which appear from the general history of the cases under my care coming from this cause. Unfortunately, the data are imperfect, and only include some general notes, which will become landmarks for further and more accurate study in the future.

Of the 67 cases of inebriety dating or beginning from injury, which I have recorded, the following statement represents the condition noted on admission to the asylum.

- 16 cases were periodical dipsomaniacs.
- 10 cases were irregular dipsomaniacs.
- 18 cases were periodical inebriates.
- 15 cases were irregular or steady inebriates depending on circumstances.

11 cases were irregular, impulsive inebriates, with criminal tendencies, and without any conception of duty and obligation to others.

6 cases were of that exhausted anæmic class in which inebriety seemed but an accidental phase of profound degeneration.

Dipsomaniacs are distinguished from other cases by the maniacal impulse to procure spirits, which at the time is an irresistible mania, filling every impulse and thought of the mind. In periodical cases it begins after a certain distinct interval, and grows rapidly up to a certain point of intensity, then dies away abruptly. In irregular dipsomaniacs it appears and disappears with the greatest irregularity, but is marked by the same maniacal tendency and impetuosity.

These cases differ from the inebriate in the intense longing for alcohol, and nothing else; while the inebriate suffers from a form of psychical pain and agony that calls for relief from any source, no matter what: anything to quiet the irritable, agitated nerve-centres. The dipsomaniacs are more clearly insane, and seem to have crossed the border-line of sanity; while the inebriate crosses and recrosses it with confusing uncertainty. The form of injury from which these cases began is of interest, and suggestive of the importance of further studies in this field.

Of the 16 cases of periodical dipsomaniacs, the injuries were as follows:

- 2 cases had lacerated wounds of the head, and fracture of the skull.

- 7 cases of concussion from falls and blows on the head.

- 1 gunshot wound of the face.
- 1 gunshot wound of shoulder.
- 2 severe lacerated wounds of the hand and arms.
- 1 of fracture of the femur.
- 2 crushed foot and leg.

Of the 10 cases of irregular dipsomania, the following appeared:

- 3 cases of blows on the head and concussion.
- 2 of wounds of the face.
- 1 shell wound of the femur.
- 1 gunshot wound of the knee-joint.
- 1 blow on the abdomen followed by peritonitis.
- 2 severe wounds of the extremities.

The injuries of the remaining cases were distributed as follows:

- 2 fractures of the bones of the head.
- 18 cases of blows on the head and concussion.

- 10 fractures of different bones with contusions and lacerations.

- 5 cases followed extensive flesh wounds from burns and injuries.

- 3 blows on the abdomen, with peritonitis.
- 3 from hemorrhage, coming from injury of the artery.

- 1 followed the successful operation of removal of stone from the bladder.

- 9 cases came from general injuries of the extremities.

I have examined the dipsomaniacs separately, because all experience so far seems to indicate that dipsomania follows more often from injuries than any other cause. In the case of the inebriate, the injury may be only one of many and complex causes, at present largely unknown. The history of these cases pointed out clearly the beginning of inebriety, or the excessive use of alcohol from the time of injury, or immediately after, so that the connection could not be mistaken. In all probability these injuries were severe, and attended with mental shock and profound exhaustion and constitutional changes at the time, although the history on this point is not accurate. *A study of the influence of heredity in these cases was of great interest.*

In twenty-six instances inebriate ancestors were traceable in both the parents and grandparents. The most frequent histories were those of inebriate fathers and grandfathers on the mother's side. In eighteen cases insanity, epilepsy, and hysteria were marked in the ancestors of two generations. In ten cases phthisis, rheumatism, and a history of general degeneration were noted in the parents. In the remaining cases no special heredity was marked, and in several instances the parents were of a very high order of intellect. In a number of cases the parents were evidently overworked and generally exhausted, and living lives of great irregularity. In twenty cases the fathers were brain-workers, and in ten instances they were men of leisure and idlers. In one case the grandfather and father began to drink at forty, and died from excesses a few years after. The son was temperate up to thirty-nine, when he began to drink, following concussion of the brain. In another family nearly all the male members had died of consumption at about forty-two years of age. The last member fractured his leg at forty, and drank to great excess during convalescence, and for five years after, until admitted to the asylum.

In another case, in which consumption had been prominent in every member, one of the family had a gunshot wound of the jaw, and became an inebriate immediately after. Six years later he spent four months in an asylum, recovered, and consumption and death followed soon after his discharge. These and other facts show that heredity was a large factor in the causation.

Another inquiry as to habits of these cases previous to the injury and drinking, brought out the following facts:

In thirty-one of these cases there was a history of moderate and occasional use of alcohol before the injury. It was clear in most of these cases that no marked excessive use of spirits had preceded the

injury, and that the inebriety after was unusual and unaccountable. In twenty-one cases total abstinence from all spirits was claimed up to the outbreak of inebriety.

In the other cases the history bearing on this point was not clear, but at all events the inebriety following was distinct, and each one claimed that it began at a certain time dating from the injury. From a *grouping of facts bearing on the physical condition of these cases at the time of injury*, over half of them were evidently suffering from anæmia, exhaustion, and general debility at the date of injury. For instance, four were business men with great care and responsibility. Seven were overworked professional men, and many others were leading lives of much physical irregularity, and general neglect of all natural, healthy living.

It was clear from this that heredity, moderate drinking, general anæmia, and exhaustion, were very powerful factors in the causation. They had literally opened the door and prepared the ground for the development of inebriety or other neurosis. The injury was merely the explosion of a long train of causes that had been gathering in the past. The *progress of these cases* was more rapid, and the action of alcohol more profound. In most cases the toxic symptoms were prominent, the delirium and paralysis longer in duration, and all the phenomena more intense and active. The sudden onset of inebriety is always an indication of grave disturbance of the brain-centres, and the action of alcohol on these centres is soon followed by many indistinct forms of general paralysis. Psychical delirium and melancholy, with various complex physical and mental symptoms, merging into acute disease of different organs, appear with more or less regularity.

Cases which have no preparation of heredity, moderate drinking, or exhaustion, are less prominent, and follow a line more or less irregular and uncertain. The prognosis is better in these cases than in the other, and the sudden appearance of inebriety after some severe shock to the body indicates temporary failure of some central ganglion, which may recover after a time. The treatment varies with the case, but is all summed up in brain rest in circumstances the most favorable to build up and strengthen all parts of the body. This can only be successfully carried out in exact surroundings where all the functions and activities of life can be regulated and controlled. An asylum or hospital with every appliance of surroundings and service to this end is essential, and the time of treatment lengthened out to years will always give the best results.

An outline history of some of these cases will more clearly bring out the facts, and aid to further study.

It will be understood that all cases are not so distinct; that many present halts and obscure changes which, studied alone, are both vague and confusing, but, when seen higher up and collectively, are found to follow a distinct line from stage to stage.

They all correspond in beginning after some profound injury to the head or body. The following is a typical case of inebriety springing from traumatism direct.

A., merchant, thirty-four years of age; had always

been a total abstainer; a man of position, family, and wealth. No heredity could be ascertained. Received a fracture of the skull from a falling box; was unconscious for a time, then recovered after a few weeks' rest and quiet in bed. No spirits were given, or suggestion of their use or value made, and yet suddenly he procured a quantity of brandy and drank to intoxication. He gave as the only reason that he wanted it, and must have it or die. In a short time periodical dipsomania appeared, and after three years of great excesses he came to the asylum. He recovered after four months' residence, but relapsed within a year, and died of cerebral hemorrhage. A state of abject helplessness, and failure to realize his condition, was prominent from the first.

Case II. was a bank clerk, forty years of age, strong, temperate, and a total abstainer. No heredity in the family. Was knocked down by a burglar and gagged, remaining unconscious for several hours. He suffered from a low fever for two weeks, then recovered, but brought home large quantities of spirits and drank to intoxication at night. He gave no reason for this conduct, but continued to drink every night, then developed into a dipsomaniac, and drank to great excess at times at night for five years. He then was admitted to the asylum, and finally disappeared after three months' residence. The opinion of his friends is that he relapsed and committed suicide.

Cases III. and IV. illustrate inebriety coming from injury, with a marked heredity.

B., a travelling salesman, thirty-four years of age, temperate, and hard-working. Father an inebriate, and mother died of consumption. Was a total abstainer from principle. Fractured his femur, and was laid up for four months. The next day after returning to work, he drank to great excess, and was a pronounced inebriate for many years. After two months' treatment he engaged in farming in the far west, and died a few months after from pneumonia.

C., a machinist, forty-eight years of age. A total abstainer, and a man of character and position. Father died of delirium tremens, and grandfather a periodical drunkard. Had his hand jammed so badly that amputation was necessary. He was confined to his room for three months, and all unexpectedly drank alcohol to intoxication. He became a periodical inebriate, and after some years of great excess was sent to an asylum, and recovered. Two years after he relapsed and is now in an insane asylum.

In the following cases a period of moderate drinking preceded the injury and inebriety:

D., a farmer, with no heredity of insanity or inebriety. Forty-two years of age, and well. Had drank spirits occasionally, but never to excess, using it only on special occasions, and with friends. He was thrown from a wagon, striking on his head, and suffered from concussion. Almost immediately he drank to great excess, and continued for two years, using it on every time and occasion. After an attack of delirium tremens he was brought to the asylum, but ran away in a few days, and finally died some months later from general excesses.

E., a lawyer and politician, was a moderate and occasional drinker, never using spirits to excess

and prided himself on his ability to drink always in moderation. He was thirty-nine years old, and in apparent health, when he received a severe blow on the abdomen followed by peritonitis. After recovery he became a steady inebriate, drinking spirits to intoxication every day. A few weeks' asylum treatment was followed by relapse, and his final disappearance in the far west as a chronic case.

These cases are distinct and unmistakable in their origin, but not unfrequently cases appear in which a history of moderate drinking preceded the injury, and excessive use of spirits or inebriety followed one, two, or three months after.

When such cases are studied, it will be found that some entailment of the injury, or symptom of impaired health and vigor, has remained over from the injury, and finally, from some unknown causes, developed into inebriety; very much in the same way that insanity or epilepsy appears long after some head or body injury has been sustained, and can be traced to it. Many very important questions gather about this subject, which cannot be answered at present, until some general study of a large number of cases is made.

The following conclusions may be accepted as representing the facts so far established on this subject:

1. Inebriety takes its origin directly from traumatism, particularly head injuries, in a certain percentage of cases.
2. Such cases are prominent in the sudden outburst of the drink-craving, its precipitate character and intensity passing into chronic conditions at once.
3. Complex psychical and physical phenomena, pointing to a general profound state of degeneration of the brain and nerve-centres, are present in nearly all cases.
4. The progress of these cases is generally uniform and along a certain definite line, with but few changes or variations.
5. In the history, heredity, moderate drinking, and habits of irregularity are common factors preparing the way for the final developing of inebriety, growing out of the injury to the system.
6. The prognosis is always grave and the treatment of little use, unless it is adapted to each case and extends over a sufficiently long time to warrant a full restoration.
7. The pathology and psychology are unknown, but practically the surgeon should remember that a certain number of his cases who inherit some inebriate or insane neurosis, or are moderate users of spirits, are likely to develop inebriety from the slightest causes. Hence alcohol should be withheld as a medicine at this time.

LACERATION OF THE CERVIX UTERI DURING LABOR.

BY JOHN FERGUSON, B.A., M.B. UNIV. TORONTO; L.R.C.P. EDIN.; L.F.P.S. GLASGOW.

DEMONSTRATOR OF ANATOMY IN THE TORONTO SCHOOL OF MEDICINE, TORONTO, CANADA.

This important question has received a good share of my time for several years. As a student and practitioner both in this country and in Britain,

I have taken every care to gather information bearing upon it. The results of this work I shall now lay before the profession; and, in doing so, must express the hope that others, who have better facilities for the same line of research, shall avail themselves of their privileges, and make known their conclusions in due season.

In coming to any fixed opinion on a question like the one now under consideration, many circumstances require to be carefully weighed, and unless a due share of attention be given to each of these our efforts may not only be useless, but positively misleading and hurtful to the cause which it is intended they should further.

To begin with, all our attention ought not to be directed to the case of laceration of the cervix, as it occurs in the human female. The comparative study of the question will throw much light upon our path, and enable us to avoid, on the one hand, many dangerous errors; and, on the other, to arrive at not a few valuable truths. Then we must assign a proper share of attention to all the circumstances related to labor, as conducted under widely different conditions in the same race or class of persons; and again, as it occurs in different races and in different climates, and in these again as it is affected by very varying customs or fashions during the progress of parturition.

In the first place, I shall glance into the comparative side of the question. These observations were made on ewes, bitches, cats, cows, mares, and sows. In the case of the ewes, fifteen were examined, all having had lambs on one or more occasions. The cervix in all of these was healthy and normal, with one exception, in which there was a very slight laceration. There was not the slightest evidence, however, that this laceration had given rise to any diseased condition of the cervical or uterine tissue. Nineteen bitches have been examined. Some of these have had pups a number of times. In no case could any laceration be found. The cervixes were quite healthy and firm. The uterus and cervix of thirty-five cats, have, so far, been carefully seen. These animals were all, I believe, multiparous. In only one was there the least evidence of tearing; and in this case it was so very slight as scarcely to deserve any mention, further than to show the results of the search. Two hundred uteri from cows have been subjected to scrutiny. These, like those of the sheep, were obtained from slaughter-houses. Of these two hundred, three showed some laceration, though not to any great extent, and one very slight fissuring. The tissue of the cervix in these four seemed, however, quite healthy, and contradicted the notion that a laceration necessarily leads to any unhealthy state of the part involved. It is almost unnecessary to state that all these cows had given birth to calves. Five samples have been examined from mares. In one there was laceration. This mare had had six foals. The others had one, two, four, and nine respectively. Although there was fissuring in these four, the injury was extremely slight. Thirteen sows' uteri have been examined, and with negative results in all cases.

Thus far, two hundred and eighty-seven animals

have been examined, yielding seven cases in which there was more or less damage done to the cervix during the act of parturition. In none of these seven did there appear to be any evil results from the lacerations such as they were, judging from the condition of the cervical tissue.

Now, turning to the human female, much real information can be gained by studying examples of cervical laceration as they occur under different circumstances. The first group I shall refer to is that in which laceration took place, and in which the labor was hurried by medicinal agents. In this group I can place altogether twelve primiparous women. Three were attended by physicians, and nine by midwives. From the statements made by these twelve, there is no doubt that ergot had been given to hasten labor in the early stage. These persons state that something was given to them which caused severe and steady pains, and that, too, before they had been long in labor; in some cases, before any escape of water or the appearance of a "show." Now, of these twelve, there is unmistakable evidence of laceration of the cervix in ten of them. This is surely a fearfully large percentage! Had these women been left alone, with no other help than that required to cut the cord and take the child out of the way, things would have gone much better with them.

The next group contains twenty-one cases. They are all examples of forceps-delivery, and are also primiparæ. Five of these I had the opportunity of examining while in Britain. Four came into my hands after coming to Toronto, from various parts of Britain. All of these said that forceps had been used; and in eight there was well-marked laceration. Eight were attended in this country in different parts, yielding six examples of laceration. In four cases, which occurred in my own practice, in which forceps had to be used, there were lacerations in three, as shown by examination made some time afterwards.

Here, then, we have twenty-one cases of first births aided by forceps, and presenting seventeen examples of well-marked laceration. This is also a pretty high percentage. Now, it would be unfair to say that this was entirely due to the mere fact that the forceps were used; much of the real cause, no doubt, could be found in the conditions demanding their use. In my own four cases of primiparæ, followed by lacerations, the forceps were a necessity. Still, it cannot be denied that their use does tend to the production of this misfortune; and every caution should therefore be used always in their employment.

The next group of persons, twenty-nine in number, had been confined only once. In these there was no evidence that any urging drug had been used, nor had the forceps been employed, in the cases that had been attended by other physicians, eleven in all. In the remaining eighteen, delivered by me, the progress of the labors was left entirely to nature. In the eleven cases attended by others, there was no laceration worthy of the name; while in the eighteen attended by me, there was one case of slight laceration, which, however, gave rise to

no disturbance, and was left, as a consequence, untreated.

Thus it will be seen that of twelve cases urged on by ergot, there were ten examples of laceration; and of twenty cases assisted by the forceps, there were seventeen branded with this mark. On the other hand, twenty-nine labors left to nature, gave only one lacerated cervix.

When we take into account the statements now made regarding the lower animals and the human female, it seems to me no difficult matter to draw the inference that the attendant should learn to refrain from useless interference with his midwifery cases; and, when he must interfere, he should be able to take his bearings well, and then proceed accordingly. It would be hard to conceive of any more dangerous belief than that the forceps must always be applied simply to save our time, or an hour or two of what may be called natural suffering on the part of our patient, needed to complete a normal labor. If the physician be so crowded with engagements that he cannot spare the requisite time, then he is in duty bound to humanity to relinquish some of his work. If he has not the heart and sympathy in his calling which will induce him to give to his patients all the advantages that medical science puts in his hands, then the sooner he abandons the profession of the healing art, the better will it be for his fellow-beings, and ultimately for his own conscience.

In conclusion, I would add, that it is not good philosophy to preach and practise the doctrine of shortening the sufferings in labor by the too ready use of forceps, at the risk of causing an injury that may give rise to life-long misery, or necessitate an operation attended by more real suffering and distress to the unfortunate woman, than the few labor pains that would have been required to complete the act of childbirth.

HOSPITAL NOTES.

TERRACE BANK HOSPITAL FOR WOMEN,
PITTSBURG, PA.

Service of DR. R. S. SUTTON.

(Reported by WM. L. STONE, M.D.)

MR. LAWSON TAIT'S OPERATION FOR SUPPURATING
HÆMATOCELE.

MRS. THOMAS S., an English woman aged thirty-two, was sent to Dr. Sutton about the first of June, 1884, on account of a painful enlargement of the lower portion of the abdomen. The pelvis was full, the uterus misplaced; the patient was thin, anæmic, and bore a haggard countenance. After examination, the mass, in which fluctuation was evident, was diagnosed as an abscess. As there was no bed empty in the hospital at the time, she was sent home with a letter to her physician, requesting him to tap the collection without delay. This was done by Dr. J. Q. Robinson, of West Newton, on the following day, and a very large quantity of pus was evacuated. For two weeks the patient improved in every way; by the end of three weeks the sac was full again, and she was suffering pain. Again she was

sent back to Dr. Sutton, who received her into his private hospital on June 21st, and performed Mr. Tait's operation on June 24th in the presence of Dr. Robinson, of West Newton, Pa., and Dr. Knox, of McKeesport, Pa.

An incision two inches long was made through the abdominal wall, and all bleeding was so effectually controlled that no blood entered the cavity of the abdomen. The peritoneum at the edges of the abdominal wound was then closely stitched, with antiseptic silk, on to the dome of the abscess sac lying in full view. The sutures were cut short, to be left. An aspirator trocar was introduced through that portion of the sac wall left exposed, and pus was immediately found, but it was so thick that but little could be withdrawn. The sac was now laid open and nearly a quart of pus and blood-clots was removed from its interior. The wound was cleansed of all pus and blood and well dusted with iodoform. A large glass drainage-tube was introduced to the bottom of the sac, and the wound was closed with silk-worm-gut sutures above and below it. Each suture included the pus sac which was thus secured to the abdominal wound by a double row of sutures, viz., the row uniting the peritoneum to the peritoneum covering the sac and the row closing the abdominal wound, each suture also including the sac. Prior to the operation her temperature was 99°. Six hours after the operation her temperature fell to 98.4°, and never rose above normal afterwards. On the sixth day a smaller glass tube was substituted for the large one. On the eighth day this was removed and a small rubber tube inserted. This tube and the stitches uniting the abdominal wound were removed on the fourteenth day. She returned home on the twenty-second day after the operation apparently perfectly cured, and no further trouble has been reported.

The operation was in every way satisfactory, and Dr. Sutton remarked that Mr. Tait had, by giving us this operation, done much practical good for this class of cases.

MEDICAL PROGRESS.

RESECTION AND EXTIRPATION OF THE ASTRAGALUS.

—DR. MARGARY, of Turin, reports two cases in which he operated on the astragalus for club-foot.

The first case was that of a man, thirty years of age, who acquired a very pronounced pes equinus, with astragalo-tibial ankylosis, after an internal subastragaloid dislocation. Following the precepts of König, Margary resected a wedge which comprised the whole of the head, the greater part of the neck, and three-fourths of the body of the astragalus, as well as the external malleolus, and corrected the deformity at the same time. Three months afterwards, the patient was presented before the Académie de Médecine of Turin. The form of the foot was correct, and the foot itself as solid as could be desired.

The second case was that of a man, twenty-eight years of age, who had sustained a dislocation similar to that in the preceding case. He also had pes equinus, and walking was painful, though there was no ankylosis. Dr. Margary extirpated the astragalus piecemeal. Four months afterwards, the man walked easily and without a cane. The movements of the foot were quite natural.

Margary also refers to a case in which Dr. Raffa resected the head and neck of the astragalus for pes varus, due to an old luxation of the astragalus. The correction was perfect in this case also.—*Gaz. Hebdom. de Montpellier*, July 12, 1884.

CORROSIVE SUBLIMATE AND OTHER ANTISEPTICS IN OPHTHALMOLOGY.—SATTLER has recently made some extensive experiments as to the value of different antiseptics, when used in infected animal tissues, and especially in the eye. For this purpose he used silk threads sterilized by heat and then placed in cultures of micrococci from the lachrymal sac or jequirity bacilli. These threads were then dried with care, so as to prevent the access of other substances, and then dipped, with their cultures, into different antiseptic fluids for a longer or shorter time, according to the time which the disinfecting fluids are usually kept in contact with the tissues. Afterwards, the threads were again put in the culture chambers and observed.

His experiments showed that chlorine water by far exceeded all other antiseptics, and rendered every spore incapable of development in one minute. Next in value to chlorine water was a solution of corrosive sublimate, 0.5 to 1 per 1000. Three minutes longer were necessary for solutions of 1 to 5000. Third in the list were resorcin and hydroquinone in 3 per cent. solutions. Very favorable results were also obtained with concentrated watery solutions of salicylic acid, and almost the same results were obtained with 2 or 2.05 per cent. solutions of carbolic acid. Boracic acid was shown to be extremely weak, even in concentrated solutions; thymol (1:1000) was much better in concentrated watery solution. Hydrogen peroxide, iodoform, and absolute alcohol gave also comparatively slight results. When spores of splenic fever were used, chlorine water and corrosive sublimate gave favorable, and the other substances unfavorable, results.

Sattler says that in severe corneal ulcer the best antiseptic is the incandescent iron, most conveniently used in the form of the galvano-cautery. Severe hypopyon is then quickly absorbed, and painful ciliary neuralgia disappears in a very short time.—*Centralbl. f. d. med. Wissensch.*, July 19, 1884.

HÆMATOCELE IN A CYST OF THE CORD, WITH ABDOMINAL PROLONGATION.

—DR. ROUTIER, Chief of the Surgical Clinic at La Charité, reports the case of a man, æt. 35 years, who, four years previously, had noticed that his scrotum had swollen on the left side, without appreciable cause. This swelling grew to a large size in a few weeks, and extended up into the groin. He had never had gonorrhœa, and had never had an injury of that region. Three years after its first appearance the tumor was punctured and iodine injected. He stated that on puncture being made *two quarts* of fluid resembling urine were drawn off. He seemed to be cured by this operation, but three months afterwards the swelling reappeared, and again assumed large proportions. The left side of the scrotum was now as large as the two fists, was rounded, elongated, and regular, and the tumor extended up into the inguinal region. At the lower part was a sort of rounded lump, which seemed added to the whole mass.

The skin over the scrotum was supple, elastic, and

glided over the deeper parts in a normal manner. The tumor was soft on palpation, and fluctuation was made out in every part. A cough-impulse was easily discerned in the scrotal part of the tumor, and this could be gradually followed up to about two inches below the umbilicus. The corresponding iliac fossa was not involved; it was certain, therefore, that the pouch containing the liquid turned toward the median line, after passing through the inguinal canal. There was absolute dulness wherever there was fluctuation, and there was no transparency of the scrotum by transmitted light. The tumor was irreducible, and the patient had never had hernia. The testicle was clearly defined in the lower part of the tumor, and appeared to be separated from the remainder of the tumor. This position of the testicle seemed rather to indicate an enormous cyst of the cord, than an ordinary vaginal hydrocele. The diagnosis was settled, however, by an operation which disclosed a hæmatocele in a cyst of the cord.

The operation was performed in the following manner: After an exploratory puncture, which confirmed the diagnosis of hæmatocele, an incision was made into the scrotum and sac, which brought away about a quart of a thick, grumous, chocolate-colored liquid. The cavity was then found to be lined with a thickened false membrane, which was easily removed with the finger-nail and the curette. Anatomically, the sac was divisible into three parts: 1. The scrotal portion, which was easily removed. The testicle appeared to be in a perfectly healthy condition. 2. The inguinal portion, which was also easily removed. 3. The abdominal portion, into which the finger could be forced far enough to distinguish two prolongations; one pointing toward the umbilicus, the depth of which could only be reached with difficulty; the other seemed to descend into the pelvis, and its termination could not be reached. So far as possible, the internal face of this large cavity was scraped and cleaned with mounted sponges, with which the pouch was thoroughly scoured.

When the cavity had been cleared of false membrane, a sponge soaked with solution of zinc chloride was carried in; this being done, the walls of the cyst, which were at least one thirty-fifth of an inch in thickness, were closely sutured with catgut, the interrupted suture being used. Two large drainage-tubes were then placed in the abdominal portion of the pouch, and two others in the scrotum, and the wound closed with silver sutures, after which a Lister dressing was applied. The wound was completely cicatrized in a month and a half.

Cases of hæmatocele of cysts of the cord are very rare. Duplay mentions two cases, of Huguier and J. Rochard. Knipe (*Lancet*, 1880, vol. ii. p. 300) reports a case exactly similar to the one here recorded. Gray (*Lancet*, Sept. 1883) reports a case of extensive hæmatocele of the scrotum, extending up into the abdomen, but the situation of the testicles is not mentioned. He punctured and injected carbolic solutions, which caused suppuration. He then made a large opening, resected the exuberant portion of the scrotum, and the patient recovered. Bérard (*Archives Méd.*, 4th ser., vol. xxv.) reports two cases operated on by Velpeau and Cabaret. Curling reports three cases of encysted hæmatocele of the cord as very rare occurrences. In 1876, *à propos* to a communication from M. Ollier regarding a case of hæmatocele of the epididymis, Professor Guyon said

that he had had three cases of cyst of the epididymis transformed into hæmatocele. In each case the cyst was as large as the fist. The testicle was always healthy, and was always on the outside of the cyst.—*Progress Méd.*, July 5, 1884.

A SEA ATMOSPHERE FOR THE SICK-ROOM.—DR. B. WARD RICHARDSON says that the solution to be used and diffused as a spray consists of solution of peroxide of hydrogen (10 volumes strength), containing 1 per cent. of ozonic ether, iodine to saturation, and 2.5 per cent. of sea salt. The solution placed in a steam or hand-spray diffuser can be distributed in the finest spray in the sick-room at the rate of two fluidounces in a quarter of an hour. It communicates a pleasant sea odor, and is the best purifier of the air of the sick-room he has ever used. It is a powerful disinfectant as well as deodorizer, acting briskly on ozonized test solutions and papers. Mr. Carl R. Schomberg has recently invented a large spray-producer, which will diffuse the artificial sea air through a hospital ward.—*The Asclepiad*, July, 1884.

INTERNAL STRANGULATION CAUSED BY EXTRAUTERINE PREGNANCY.—M. Notta reports a case of this kind, operated upon by M. BOUILLY. The woman was forty years old; had for several days suffered from vomiting of bilious and fecal matter, and had distinctive symptoms of intestinal occlusion. The symptoms were so grave that M. Bouilly at once decided to practise laparotomy.

A large tumor had been recognized in the right flank, the first manifestations of which had appeared seven years before. The abdomen was opened, and the tumor found to be a foetal cyst. The foetus and its envelopes were contained in a thickened fibrous pouch, formed by the remains of old peritoneal false membranes. The foetal cyst was easily removed, and M. Bouilly found that the intestine traversing the peritoneum at the upper and posterior part of this capsule was strangulated. The adhesions were loosened, and the wound closed. The patient died of collapse on the next day.—*Revue Méd. Franç. et Étrang.*, July 26, 1884.

RESECTION OF THE PYLORUS FOR CANCER.—At a meeting of the Medical Society of St. Petersburg, DR. BAIKOFF (*Vratch*, 1883, No. 8) reported the case of a woman, aged thirty-eight, who for three years had suffered from heartburn, eructations, and constant vomiting after every meal, and, of late, had become extremely cachectic and emaciated. The stomach was found much distended. In the situation of the pylorus there could be felt a hard, nodulated, movable tumor. The operation was performed under chloroform and the carbolic spray, and lasted four and a half hours. A transverse incision, 12 cm. (4½ inches) in length, being made, the peritoneum was united with the skin. The tumor, 11 cm. (4½ inches) in length, 7 and 8 cm. (2½ and 3½ inches) in breadth, occupied the pylorus and adjacent parts of the stomach and duodenum. The neighboring glands were slightly enlarged, but not infiltrated. The tumor was isolated and gradually separated by scissors, first from the small curvature and then from the duodenum, the wound in the stomach being closed step by step with the removal of the new growth. The

remaining part of the latter was cut away after the duodenum had been sewn up to the stomach. About a hundred vessels were tied with catgut, and about eighty catgut sutures (Nos. 0 and 1) were used for closing the wound in the stomach and duodenum. The abdominal incision was treated after Lister's plan. The pulse after the operation was small and intermittent, but the patient soon recovered under the influence of a hypodermatic injection of musk, camphor, and ether. There was no fever up the third day, when a slight elevation of temperature occurred. On the fifth day the dressing was changed, several sutures being removed, and the patient, who had been up to that date fed through the rectum, began to take milk. On the seventh day, however, she died, after complaining of pressure and pain in the epigastric region. The post-mortem examination showed that the stomach was distended with fluid, though the exit was entirely free, since the contents of the stomach passed into the bowel when the body was turned on its right side. The gastro-duodenal wound was firmly closed with adherent inflammation. The author thinks that the patient died from exhaustion and a paralytic state of the stomach. The tumor was scirrhus, with partial transformation into medullary cancer.

In the same number of the same journal, DR. N. A. VELIAMINOFF details the case of an extremely emaciated and nervous woman, aged forty-two, who presented all symptoms of a movable cancerous tumor of the pylorus, and in whom Professor K. K. Reyher had excised the latter. The length of the transverse abdominal incision was seven centimetres. The tumor was removed as a whole, the gastric wound being closed by double (*i. e.* both by mucous and serous) sutures. The operation was conducted without spray, and lasted about four hours. By the end of the second hour of the operation, collapse appeared, and eight hours after the resection the patient died from exhaustion.—*London Med. Record*, July, 1884.

THE INFECTIOUS GENESIS OF RELAPSE OF TUBERCULAR GRANULAR DEGENERATION AFTER OPERATIONS ON TUBERCULOUS GLANDS, BONES, AND JOINTS.—M. WISKEMANN (*Archiv f. klin. Chir.*, Bd. xxx. S. 341) has treated, between July, 1879, and January, 1882, at his private hospital in Illzack, eighty children and young persons for tuberculous diseases of the lymphatic glands, bones, and joints. In no case was there any accidental wound complication. Only three patients died, and two of them of tubercular meningitis. Of the different ways in which tuberculous relapse may occur, Wiskemann lays special stress on what he terms "latent infection." He recommends crystallized iodoform more as a prophylactic in clean wounds than as a dressing for granulating surfaces.—*Centralbl. f. d. med. Wissensch.*, July 26, 1884.

EXTIRPATION OF THE LARYNX.—MR. THOMAS JONES removed, at the Manchester Royal Infirmary, on April 26th, the whole larynx, on account of epithelioma, from a man aged forty-four years.

A vertical incision was made in the median line of the neck, reaching from the hyoid bone above to the thyroid isthmus below. The structures were carefully separated from the front of the thyroid cartilage,

which was then divided and the two halves separated. The interior of the larynx thus brought into view was found to be almost completely filled with a new growth. The mass reached upwards to the epiglottis and downwards as far as, and to a certain extent into, the trachea. The extent of the growth made it evident that nothing short of complete extirpation would be of any avail. In order to do this, more room was required, and it was obtained by prolonging the incision downwards to the sternum, then dividing several more rings of the trachea so as to push the tracheotomy tube further down. This being done, the soft parts were now dissected off the sides of the thyroid cartilage and its attachment to the cricoid severed. The left half of the thyroid was then removed, its remaining attachments being divided with scissors. The right half, including the epiglottis, was treated in the same way. The laryngo-pharyngeal septum was found to be so extensively infiltrated that it was impossible to separate the larynx from the pharynx, so the whole of the anterior and lateral walls of the latter were taken away, only a portion (about an inch wide) of the posterior wall being left. This was subsequently divided and sutured to the margins of the skin incision. The cricoid cartilage, together with the first ring of the trachea, was next excised. The upper end of the trachea, was fixed to the skin by a carbolized silk suture on each side. Above the points at which the œsophagus was attached to the skin there was a large cavity which communicated with the mouth. It was washed out with a solution of chloride of zinc (forty grains to the ounce), and afterwards plugged with iodoform gauze. The patient left the Infirmary on June 14th, wearing one of Foulis's tubes, and taking all nourishment by the mouth.—*Lancet*, August 2, 1884.

PULMONARY GANGRENE.—The sputa of such disagreeable odor expectorated by persons who have pulmonary gangrene always contain elastic fibres in large quantity. It would seem, then, that the elastic fibres of the lung, are dissociated and partly destroyed by a sort of special ferment, and various attempts have been made to prove the existence of this ferment. Glycerine has been added to the sputa from a gangrenous lung, and the mass filtered. For a comparative experiment, putrid liquids of another kind, and sanious pus from the pulmonary cavities of persons dead of tuberculosis, are taken. The elastic tissue dissolves in the filtered gangrenous liquid in two days, whilst it remains intact in the putrid liquids for about five days.

For the gangrenous liquid, this solution is made in an alkaline medium. But if the elastic fibres are placed in a solution of pepsin, the latter must be acidified. With pancreatine, on the contrary, the elastic tissue is dissolved in a neutral medium. However this may be, there is a true solution by means of a gangrenous ferment, which acts as a gastric ferment on the elastic tissue, which is so resistant to chemical agents.

It appears that this gangrenous ferment dissolves the albumen of white of egg, and does not dissolve colloid substances. If, therefore, it be desired to stop the rapid liquefaction of the pulmonary tissue in cases of gangrene of the lung, or of acute tuberculosis, some substance must be found which will hinder the action of this ferment. From certain experiments, FILEHNE believes in the efficacy of thymol, turpentine, phenol,

salicylic acid, and sulphate of quinine. But as these substances only act when concentrated, he proposes to inject them directly into the pulmonary cavities through the thoracic walls; but he advises that experiments be first made on animals, in order to determine the exact effects caused by such procedures.—*Revue Méd. Franç. et Étrang.*, July 26, 1884.

TREATMENT OF SYCOSIS.—The *Wiener med. Blätter*, of April 24, contains an article by DR. VON HEBRA, on a new treatment of sycosis. Being dissatisfied with the customary maceration of the skin by means of diachylon ointment, he sought, some years ago, to discover some means by which this might be prevented. He now employs almost invariably the following plan of treatment. Any hair which may be left on the parts affected is cut as close as possible with scissors, and some emollient ointment applied for twenty-four hours, care being taken that it does not contain lead, which would form a compound with the sulphur to be subsequently employed. The crusts being by this time broken down, the part is shaved, by which means the tops of the pustules are removed and their contents evacuated. The whole of the affected surface of the face is then covered with a modification of Wilkinson's ointment, included in the Hungarian pharmacopœia under the name of "Unguentum contra scabiem," which is covered with a piece of flannel, and secured by a calico bandage. This dressing is changed every twenty-four hours, when the contents of each pustule are pressed out, and the hair which is usually found in the centre removed. When all the pustules have disappeared, the redness and scurf are removed by the application of an ointment containing one part of zinc to three of vaseline, and the cure is complete, in some cases within a few days. Several cases are cited in illustration.—*London Med. Record*, July, 1884.

QUININE IN SUPPOSITORIES.—R. PICK recommends the use of quinine in the form of suppositories, by which better effects may sometimes be obtained. For children, gr. xv to xxij of muriate of quinine may be made up with gr. xxx of coca butter, and some simple cerate. He recommends that an enemata be given one hour before the introduction of the suppository, and, further, that, in very restless children, the suppository may be introduced during sleep.—*Centralbl. f. d. med. Wissensch.*, July 26, 1884.

OPERATION FOR ABSENCE OF LOWER END OF RECTUM, AND PASSAGE OF FECES THROUGH PENIS.—DR. FRANCIS J. SHEPHERD, of Montreal, reports the case of a child, three days old, which had an imperforate anus, and passed its feces through the penis. It had a very slight fullness of the perineum, a well-marked median raphe, and a slight puckered depression at the site of the anus. He decided first to try and reach the bowel through the perineum. After placing the child under chloroform, he made a free incision in the median line, dissecting carefully backwards and upwards in the direction of the rectum, and frequently placing his finger in the wound to feel for fullness or fluctuation. He dissected in this way to a depth of fully two inches, when, discovering a fluctuating tumor, he punctured it with his knife, and was pleased to see large quantities of feces escaping through

the wound. He then enlarged the puncture in the bowel, and without much difficulty drew it down to the external wound, and held it there by catgut stitches.

The child was seen seven months afterwards, and was in good health.—*Edinburgh Medical Journal*, August, 1884.

GASTROSTOMY.—DR. N. A. VELIAMINOFF, of Prof. Reyher's clinic, reports (*Meditz Obozrenie*, Fasc. 5, 1884) the case of a man, æt. fifty years, who suffered from cancer in the middle third of the gullet, and in whom he did gastrostomy (in two stages, with four days' interval). The patient got up on the third day after the operation, and four and a half weeks later he was shown to a meeting of the St. Petersburg Medical Society. Two months after gastrostomy he returned to his occupation. The patient died from cancerous perforation of a bronchus in the eighth month after the operation.—*London Med. Record*, July, 1884.

RESECTION OF THE LINGUAL NERVE FOR NEURALGIA.—W. J. KUSMIN reports (*Letopis Chirurg. Obschtschest.*, v. Moscow, No. 1, 1884) the case of a man, æt. 62 years, who for three years had had neuralgia of the third branch of the trigeminus, in the left half of the mouth, the tongue, in the region of the mental foramen, and in the zygomatico-temporal region. Section of the mental nerve and of the auriculo-temporal branch of the trigeminus caused only temporary abatement of the trouble. One year ago, the inferior alveolar branch was resected at its entrance into the lower jaw; this gave only temporary relief. Finding that pressure on the lingual nerve caused pain, Kusmin resected it at the border of the tongue, behind the sublingual gland. The pain ceased entirely in three days, and the patient has not felt it now for six months.—*Centralbl. f. Chir.*, July 26, 1884.

EXTIRPATION OF THE LUNGS.—BIONDI reports the results of numerous experiments made on sheep, dogs, and cats. Partial extirpation, and amongst others that of both apices, were all followed by cure; total extirpation of one lung was successful in more than fifty per cent. of the cases, and several deaths seem to have been due more to some imperfection in the antiseptic dressing than to the operation itself.—*London Med. Record*, July, 1884.

MASKING THE TASTE OF IODIDE OF POTASSIUM.—MR. GÉRARD LAGUE says that syrup of currants completely disguises the taste of iodide of potassium; and persons who cannot take this drug on account of its disagreeable taste may use it by adding that syrup.—*Revue Méd. Franç. et Étrang.*, July 26, 1884.

FORMULÆ FOR RESORCINE.—SCHMIDT gives the following as a useful formulæ for the administration of resorcline. For vaginal injections: Resorcline, gr. xv-xxx; water, f℥ij. For hypodermatic injections: Resorcline, ℥iv-℥v; water, f℥iij. For topical application: Resorcline, ℥iv-℥ijss; glycerine (neutral) or vaseline, ℥j. For internal administration: Resorcline, ℥ss-℥j; simple syrup, f℥ijss; aromatic water, f℥iij. The last to be taken in doses of one teaspoonful every two hours.—*Revue Méd. Franç. et Étrang.*, July 26, 1884.

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SATURDAY, AUGUST 23, 1884.

THE COPENHAGEN CONGRESS has adjourned, and has left the pleasantest of recollections in the memory of all who participated in its proceedings. Sufficient time has not yet elapsed for us to estimate accurately the scientific outcome of the meeting, but our cabled reports justify the opinion that it was worthy of the occasion, and of the distinguished men of our profession who had gathered in the Danish capital to take part in its deliberations.

As we foreshadowed last week, we now have the pleasure to congratulate the American profession on the acceptance of the invitation to hold the next session in Washington. In extending that invitation the profession assumed a weighty responsibility, and in its discharge it will be found no easy task to equal the success which our Danish colleagues have just achieved, and of which they have good reason to be proud.

TUBERCULOSIS OF THE MEDIASTINAL GLANDS AND PURULENT PERICARDITIS.

In the earlier days of pathology a large proportion of the cases of pericarditis were looked upon as primary or spontaneous. As investigations into the anatomy of this inflammatory disease became more extensive and accurate, it grew evident that cases of this kind are in fact of rare occurrence. This is not only true in the sense that many cases of pericarditis are merely the local expression of some form of general disease, but also for the reason that in numerous instances cases apparently idiopathic have been found upon exact anatomical investigation to be secondary

to local inflammatory processes, often of such a kind as readily to escape observation, in the immediate neighborhood of the pericardium.

In addition to the long-recognized connection between inflammatory processes of the pleuræ and of the endocardium and pericarditis, attention has been more and more fixed upon the structures of the mediastinum and especially upon the intrathoracic lymphatic glands. Zenker, in his investigations upon the influence of chronic inflammatory processes in the mediastinum upon the formation of oesophageal diverticulæ, years ago directed attention to the occurrence of perforative pericarditis in these conditions, and reported among fifty-four cases of traction-diverticula of the oesophagus from disease of the lymphatic glands, nine cases of complete and one of partial pericardial adhesion. In 1879 the same observer again insisted upon the part played by inflammation of the structures of the posterior mediastinum in the pathogenesis of pericarditis, and emphatically asserted that the lymphatic glands of this region were commonly the overlooked source of the inflammation.

Baréty, in 1874, found among 101 cases of disease of the thoracic glands 18 in which the pericardium was implicated, sometimes showing effusion, sometimes the lesions of past inflammation, from mere cloudiness to complete obliteration of the pericardial sac. In all these cases there was cheesy degeneration of the affected glands in various stages. In 11 cases of pericardial effusion, Baréty found the fluid serous in 9, and sero-hemorrhagic in 2. Zahn reported, in 1878, an interesting case of *purulent* pericarditis caused by the double perforation of a knot of lymphatic glands into the oesophagus and pericardium. The softened glands occupied a position between the bifurcation of the trachea and the aorta, and the opening into the pericardium was situated at its upper posterior wall. The sac itself was filled with a great quantity of thick, purulent, but not ill-smelling, fluid. Etenost, in an elaborate study of the chronic affections of the tracheo-bronchial glands and their results, in 1879, reported several instances of perforation of the pericardium by the softening of melanotic glands, with more or less extensive soldering of the pericardial surfaces by pseudomembrane, which was in several cases pigmented.

In the light of the rapidly advancing knowledge of the relation which the lymphatic apparatus, and especially the lymphatic glands, bears to the organized causes of disease (microbes), these glands must be looked upon as most dangerous neighbors for the pericardium. Modern pathology, largely concerned as it is with the subject of tuberculosis, affords to-day no more important matter for investigation than tuberculosis of the lymphatic structures in all their relations.

Prior to the discovery of Koch, Weigert, in a series of communications collected in his work on tuberculosis of the veins, recognized the intrathoracic lymphatic glands as the starting-point of the tuberculous virus into the blood-stream, and derived from anatomical considerations much support for the doctrine of the infectious nature of the tubercular process. The final recognition of the parasitic character of this virus, so far from diminishing the importance of such anatomical studies, has, in fact, greatly increased it. The question of the mode of entrance of the tubercle bacilli into the various organs, as well as into the blood-stream, continues to be the subject of earnest discussion.

As regards tuberculous inflammation of the serous membranes, Weigert urged the view that it is almost without exception due to direct infection from neighboring organs by contiguity. Especially has this author insisted upon the secondary nature of those cases of tuberculous disease of the pericardium in which the extension of the affection from a tuberculous pleura could be excluded, and which, therefore, have appeared to be instances of "primary" tuberculosis derived from infection through the blood. In these very cases, the lymphatic glands of the thorax constitute a swarming depot for the organisms which infect the pericardium by contiguity, and, in truth, less the bronchial glands themselves than the little glands which lie on the anterior surface of the pericardium in the mediastinum, or which are situated at its summit, in the region of its attachment to the great vessels.

Dr. Alfred Kast (*Virchow's Archiv*, June 6, 1884) has recently reported a case of great interest as bearing upon this matter. A laboring man, aged fifty-three, died of exhaustion, with purulent pericardial effusion and serous effusion into both pleural sacs. Seventeen days before death, 36 ounces of thick pus had been aspirated from the pericardial sac. This fluid was filled with tubercle bacilli. At the post-mortem examination, there were found cheesy degeneration and central softening of the lymphatic glands of the neck, of the anterior and posterior mediastina, and of the roots of the lungs; perforation of a cheesy lymphatic gland into the pericardium; induration of the apices of the lungs; moderate chronic and miliary tuberculosis of both lungs; and double pleurisy, with compression of both lower lobes. The pericardium was free from tubercle. Kast calls attention to the composition of the aspirated fluid which, although laden with bacilli, did not present the appearances usual in effusions due to tubercular inflammation of serous membranes. He attaches to a bacillus-laden effusion, without tuberculosis of the inflamed serous membrane from which it is derived, a general diagnostic value, as indicating the perforation of the serosa by an adjacent softening tuberculous gland,

or, in the case of the heart, by a softening solitary tuberculous mass in its muscular walls. He also regards the existence of bacilli in the pus of pleurisy as likewise indicating the perforation of the pleura by a softened peripheral cheesy mass.

The differential diagnosis between bacillus-containing, usually purulent, "perforation-exudations" and the serous or sero-hemorrhagic effusions without bacilli which accompany the miliary tuberculosis of serous membranes, and the serous and purulent inflammations which are excited by a neighboring inflammatory process, without perforation, will hereafter be attended by little difficulty.

Weigert has suggested that the tendency of the tuberculous matter to invade the entire organism through absorption from serous sacs is counteracted by another peculiarity of this virus, namely, its tendency to produce cheesy inflammation. By this process it rapidly blocks the lymph-channels leading away from the serous cavities, and in this manner, especially when there is a sudden eruption of bacilli in great numbers, prevents general tuberculosis.

SUTURES OF THE ABDOMEN.

Now that abdominal section is such a frequent operation, the question as to the method of using sutures is one of great practical importance, and a valuable paper which has recently appeared from the pen of BAKO, of Budapest, on this subject is of timely interest. He points out that sutures badly applied are not without inconvenience, and may even produce hernia. But we have never seen a hernia after an ovariectomy unless the patient was up too soon, or supporting strips of adhesive plaster were neglected, or a bandage was laid aside too early. Nevertheless the accident may arise by the improper application of sutures.

Bako gives the following classification of sutures: First, those which include the abdominal walls and the peritoneum. This is the practice followed by almost all ovariectomists, and is not, as the author seems to indicate, peculiar to Spencer Wells; ovariectomists in America operating before Spencer Wells did, used the suture in this way. The second variety of abdominal suture is that which does not include the peritoneum; this method is followed by Olshausen and Koerberlé. The third variety is that in which two sets of sutures are employed, one for the peritoneum, and the other for the abdominal walls. The last plan is that practised by Kovacs. In it the peritoneal margins are carefully united by catgut sutures, and then the ordinary sutures are introduced so as to penetrate to the connective tissue immediately in front of the peritoneum, not including the latter. When superficial sutures are used, they should embrace the skin only, for, penetrating more deeply, they narrow the extent of the surfaces

brought together in the antero-posterior direction, lessening the size and consequently the firmness of the cicatrix.

The objection to the sutures which include the peritoneum with the abdominal walls is that they draw the peritoneum into the abdominal wound, and hence, when union has occurred, the line of adhesion is thinner than the rest of the abdominal wall, and is unable to resist the pressure of the abdominal viscera, and hernia results. In the second variety, the peritoneum not being included, its edges often fail to unite. Nevertheless we find that Kœberlé does not regard this failure of union as probable, and thinks it much better to have the edges of the peritoneum approximated beneath the sutures than to include them in the sutures.

Two objections to the exclusive sutures of the peritoneum may be urged: The operation is protracted, and wounds are multiplied. Such wounds as are made in carrying a catgut suture through the peritoneum are not of insignificant size, and moreover they are liable to tear, and thus a lacerated is added to a punctured wound.

THE VIRULENT AGENT OF PUERPERAL SEPTICÆMIA.

SOME recent investigations by ARLOING as to the virulent agent of puerperal septicæmia, made to the Paris Academy of Sciences, are of great interest. He cultivated the puerperal virus in broth made of lean beef, water and sea salt; in the open air, in oxygen with normal pressure, in carbonic acid, and in a vacuum. The longest series of cultures was made with a drop of the blood of a rabbit dead of puerperal peritonitis, and carried to twenty-six generations. The multiplication of microorganisms begins rapidly, but is not complete until the fourth or fifth day.

The microbes kill rabbits in from eighteen to thirty hours, and even in some instances guinea-pigs, animals that are not affected by inoculation of peritoneal pus. If the cultures are made in a vacuum or in an atmosphere of carbonic acid, the microbes are less numerous, but have greater activity.

Arloing attributes the failure of previous experiments to the culture-liquid used, for he has found that chicken-broth causes the activity of the microbes to cease after the first or second generation, but this activity was restored by next using beef-broth. When rabbits were inoculated with the virus which had been cultivated in a vacuum, they died with all the symptoms of septic poisoning without suppuration; if the virus cultivated in the air was used, the disease was slower, and the animals presented the lesions of fibrinous peritonitis; but if the virus had been weakened by cultivation in an unfavorable medium, the disease was still longer, and purulent inflammation affected the serous membranes.

It will be seen that these experiments, in great part, sustain the theory held by most clinical observers, viz., that puerperal septicæmia is essentially one, while multiform in its manifestations, and that its cause, while conveyed to the body by different media, is also single, in short, puerperal septicæmia is the result of a poison as specific in its action, as that of scarlatina. The puerperal condition creates the susceptibility to the poison, just as individuals at a particular time, by some unknown modification of the system, are susceptible to the scarlatinal poison, and take the disease, when they have escaped in a previous exposure. Further, as the scarlatinal poison varies in intensity at different times, so may the puerperal poison have like variations, and thus an explanation is given of one of the causes of the differences in the severity of the disease depending upon the latter poison.

Arloing, however, holds that if it is proved that the microbe of the puerperal virus is single, it is not proved that it may be peculiar to the disease, but only "that puerperality realizes the conditions favorable to its introduction, and to its evolution in the human organism."

SPLENECTOMY.

AT the Thirteenth Congress of the German Surgical Association, VON HACKER, of Vienna, exhibited a lymphoid sarcoma of the spleen, which had been successfully extirpated by Billroth on March 20th. Before removal, the oval tumor measured ten inches vertically and rather more than seven inches transversely. On median laparotomy, the convexity of the tumor was found to be free from attachments, but the omentum and a coil of the intestine were adherent to the hilus. The splenic artery and vein were divided between two ligatures, and rather more than an inch and a half of the adherent tail of the pancreas required removal with the thermocautery.

In the splenectomies hitherto recorded, the operation was done for wounds, hypertrophy, cysts, wandering spleen, or leukæmia, so that this is the first ever performed for sarcoma. In addition to this point, the case is, however, interesting from the fact that, three weeks later, there was a slight increase in the number of white blood-corpuscles, but there was no enlargement of the thyroid gland or the lymphatic glands, nor was there pain in the bones, or nervous disorders.

Crédé, of Dresden, exhibited at the same Congress, a man, whose spleen he had removed two years and a half previously, on account of a cyst of the volume of a child's head. In this case, as in the preceding one, there had been no enlargement of the thyroid or lymphatic glands, and the man was apparently thoroughly well. In the discussion which followed, Czerny, of Heidelberg, stated that the woman from

whom he had removed a movable hypertrophied spleen five years previously, and who was still alive, exhibited no changes in the blood or in the organs referred to. Hence, we may infer that the spleen is not absolutely essential to life, and that its function, after extirpation, is assumed by the medulla of the bones and other lymphatic organs.

BLACKMAILING.

It is so rare that the confidential relations existing between a medical man and his female patients are taken advantage of to injure his reputation, or extort money from him, that he is in constant danger of forgetting the risks which are necessarily assumed in the practice of his profession, and that he may be entrapped when least suspecting it. Indeed, the very honesty of intention characteristic of the true physician may cause him to overlook those precautions which a bad man would naturally take.

A case which has recently been brought to the notice of the public in Philadelphia illustrates the dangers to which we are all subject. A physician, whose reputation has always been above reproach, was charged by a girl of bad character with having used instruments with the intent to produce abortion. She consulted him concerning a possible pregnancy, and he used a speculum, but no other instrument, to aid him in making a diagnosis. No sickness followed, and she never had any symptoms of miscarriage. Having previously treated her with success for an illness for which he received only thanks, he had the less reason to suppose that he was now being made the victim of a basely conceived blackmailing scheme, the character of which can be easily proven, but which, nevertheless, subjects him to great annoyance, anxiety, and expense.

The question naturally suggests itself, Cannot the physician protect himself against such unfortunate occurrences? To say that he should never examine a woman or treat her for a disease peculiar to her sex, without the presence of a third person, is to make a suggestion which it is clearly impossible to carry out in every instance. There are, however, certain precautions which should be generally observed. Under no circumstances should he consent to examine a young woman who seeks his advice for recent amenorrhœa except in the presence of a third party, or even prescribe for her an emmenagogue. The simple fact that a woman does not menstruate, in the absence of pregnancy, is nothing of itself. It is merely symptomatic. Under any circumstances, the patient is not likely to suffer harm by delay; and, as a rule, it is as well in obscure cases to give nature a chance to reassert herself. When examinations are made, extreme care should be observed in the use of the sound, as miscar-

riage has been induced more than once in manipulations when pregnancy was not even suspected.

In spite of the observance of these suggestions the practitioner will still run risks against which no set rules can guard him. But to be forewarned is to be forearmed, and the fact that a young woman seeks advice for amenorrhœa should cause him to be on his guard as to her motives until he has ascertained the true nature of her case and character.

CONSERVATISM AND RESECTION IN DISEASES OF THE JOINTS.

In an exhaustive paper contributed to the *Deutsche Zeitschrift für Chirurgie*, Bd. xx. Hefte 3 and 4, 1884, CAUMONT, of Münsterlingen, compares the relative advantages and disadvantages of conservative measures and resection in chronic inflammation of the articulations of the lower extremity, his statistics being based upon 281 cases treated in the clinic of Kappeler.

Of the entire number, the hip was affected in 129. Of these, 85 were managed conservatively, with 21 deaths, 22 recoveries with normal function, 38 recoveries with more or less loss of function, and 4 recoveries with the parts not healed. Of the 44 resections, 27 died, and 17 recovered. Hence the mortality was in favor of conservatism by 27.5 per cent.

The knee was the seat of disease in 130 cases, of which 95 were treated conservatively, and 35 by resection. Of the former, 27 died, 20 recovered with normal function, 46 recovered with more or less loss of function, and 2 remained unhealed. Of the resections, 14 died, and 21 recovered, the mortality being greater by 11.6 per cent. than that of the cases in which no operation was performed.

The ankle was affected in 22 examples. Of the 13 treated conservatively, 2 died, 6 recovered, 2 remained unhealed, 1 was still under treatment, and 2 recovered after amputation. Of the 9 resections, 3 perished, and 6 recovered with good use of the limb.

The lesson taught by this record is that, in inflammation of the hip-joint and knee-joint, expectancy is preferable to resection; and that resection secures a better result than attempts to save the joint in disease of the ankle, despite the fact that it yields a greater rate of mortality.

THE intelligence of the death of SURGEON JOSEPH J. WOODWARD, U. S. A., which occurred near Philadelphia, on the 17th inst., will be received with sorrow by the profession which he so highly adorned. His valuable labors in connection with the Medical History of the War and the organization of the Army Medical Museum, together with his numerous contributions to our science and literature, have given him wide-spread reputation, and it is a cause for profound

regret that in the very prime of life his brilliant career should have been thus abruptly ended.

Next week we shall lay before our readers a sketch of his life and labors.

REVIEWS.

SEXUAL NEURASTHENIA (NERVOUS EXHAUSTION). ITS HYGIENE, CAUSES, AND TREATMENT, WITH A CHAPTER ON DIET FOR THE NERVOUS. By GEORGE M. BEARD, A.M., M.D., etc. (Posthumous Manuscript.) Edited by A. D. Rockwell, A.M., M.D., etc. 8vo. pp. xii., 270. New York: E. B. Treat, 1884.

WHATEVER may have been the faults of the author of this little book, published since his untimely death by his friend Dr. Rockwell, he had no lack of faith in the correctness of his own opinions. What he wrote about, he seemed to be sure about. This assurance of being right has some advantages and some disadvantages. In the case of Dr. Beard, it attached to him a certain number of followers; while, on the other hand, it detached from him many who, though admiring the daring of his imagination, could not fail to foresee that it promised as little permanent gain to him and to others as the wings on which Icarus once pleased himself with soaring above the solid earth. But while the general reputation of Dr. Beard was a precarious thing, carried up rather by flights of fancy than by solid reasoning, it cannot be denied that his zeal and ambition have contributed to the cause of science and humanity, by attracting the attention of the thoughtful to a more careful study of the phenomena for which he popularized the name "neurasthenia." And though his own notions in regard to them may have been exaggerated, yet they had a basis of truth which entitles them to serious consideration, and it is not proper to sneer at the share he had in securing for them the attention they deserve. The book before us is a part of Dr. Beard's work in this direction. It relates to an integral part of neurasthenia, and one which often sorely tries the information and skill of the practitioner. It is somewhat unfortunate that it comes at a time when several other books, of seemingly similar purpose, have appeared, overweighted with unclean details, and with the effect of prejudicing the reader against everything which belongs to the same class. But this book is not unclean. Though rambling and inaccurate, it is a readable contribution to the literature of sexual disorders, and is not open to any moral objections. As to its scientific value, truth and charity forbid us to say much. It is no better than the average of the author's work, and, we think, no worse. The concluding chapter, "On Diet for the Nervous," is, in our opinion, equally characteristic and erroneous, exhibiting nothing so much as the author's ingenuity in seeming to establish a point by citing facts which militate against it.

In saying this we are not oblivious of the time-honored maxim, "*Nil nisi bonum de mortuis*," but hold it to be always subservient to a less sentimental but more needed motto, "*Nil nisi verum perpetuo*."

SOCIETY PROCEEDINGS.

INTERNATIONAL MEDICAL CONGRESS.

Eighth Session.

Held at Copenhagen, August 10th-16th, 1884.

Special Cable Dispatch from Our Own Correspondent.

COPENHAGEN, AUGUST 16TH. The Eighth Session of the International Medical Congress has just adjourned, and the Organizing Committee, of which Prof. P. L. Panum is President, are the recipients of general congratulation on the very successful culmination of their efforts. On all sides the meeting is pronounced

A GREAT SUCCESS.

On Wednesday, the excursion to Elsinore occupied the entire day

A SPLENDID LUNCH

was served in the magnificent and venerable Castle of Kronborg, which was built towards the end of the sixteenth century, and from whose turrets were obtained superb views of the straits and of the neighboring countries.

On Thursday, the Sections met in the morning as usual, and in the afternoon, SIR WILLIAM GULL, of London, on behalf of the Collective Investigation Committee of the British Medical Association, delivered, before the Congress in general meeting, an admirable

ADDRESS ON THE INTERNATIONAL COLLECTIVE INVESTIGATION OF DISEASE.

In conclusion, he presented a resolution providing for the appointment of an International Committee to undertake collectively the prosecution of pathological research. It was adopted, and the President appointed as the

AMERICAN REPRESENTATIVES ON THE COMMITTEE, Dr. Abraham Jacobi, of New York, and Dr. Nathan S. Davis, of Chicago.

In the evening the Corporation of Copenhagen gave

A GRAND BANQUET

to twelve hundred members of the Congress. Upon its conclusion, the guests were conveyed in boats to Tivoli to view the illumination and fireworks, which was a superb sight, and fully thirty thousand persons were gathered to witness it.

On Friday the General Committee discussed the place of next meeting, and after carefully considering the various suggestions which had been offered, determined to recommend to the Congress to accept the invitation,

presented on behalf of the American Medical Association, to meet in Washington in 1887.

PROFESSOR TOMMASI-CRUDELI, of Rome, gave a

DEMONSTRATION OF MALARIAL GERMS,

and exhibited under the microscope a number of very good specimens.

PROF. RUDOLF VIRCHOW, of Berlin, then gave an

ADDRESS ON METAPLASIA,

which was in every respect worthy of its distinguished author, and was received with great applause.

THE KING OF DENMARK ENTERTAINED THE MEMBERS
OF THE CONGRESS

in the evening, at a reception held in the Palace, and the occasion was graced by the presence of the members of the Royal Family. After a handsome collation had been served,

THE KING OFFERED A TOAST

to the health of the foreign members of the Congress, to which Sir William Gull, on their behalf, eloquently responded.

On Saturday morning, the work of the Sections, as laid down in the programme, was completed, and in the afternoon, in general meeting, PROF. P. L. PANUM, of Copenhagen, delivered an address

ON INVESTIGATIONS OF FOOD-RATIONS FOR MEN IN A
STATE OF HEALTH AND OF DISEASE, ESPECIALLY IN
HOSPITALS, INFIRMARIES, AND PRISONS OF DIFFER-
ENT COUNTRIES.

Upon its conclusion, upon the recommendation of the General Committee, the Congress adopted, by an overwhelming vote and amid much applause, the invitation to hold its

NEXT MEETING IN WASHINGTON IN 1887.

The formal programme of the Congress having now been completed, Dr. John S. Billings, of the United States Army, Prof. Carl J. Rossander, of Stockholm, Sir Risdon Bennett, of London, and Prof. Virchow, of Berlin, in brief speeches, presented, on behalf of the foreign members, their best

THANKS FOR THE CORDIAL HOSPITALITY

with which they had been received, and congratulations on the very successful termination of the session.

PROF. PANUM, in a short address, thanked the members for their attendance at the Congress, and wished them a pleasant journey homeward, and long life and happiness. He then declared the session adjourned *sine die*.

A FAREWELL FESTIVAL

was given in the evening to the members of the Congress and their ladies, at which there was dancing and a handsome collation.

The universal expression of opinion is that the scientific aspect of the Congress has been good. The programme of work done in the Sections was full and included the presentation of a large number of valuable papers, and the demonstration of numerous interesting pathological specimens. The Section meetings were well attended and the discussions were actively participated in.

In dispersing to their homes the members will carry with them most pleasant recollections of Danish hospitality and of the Copenhagen Meeting of the International Medical Congress.

PHILADELPHIA ACADEMY OF SURGERY.

Stated Meeting, June 2, 1884.

THE VICE-PRESIDENT, D. HAYES AGNEW, M.D.,
IN THE CHAIR.

DR. W. W. KEEN read a paper on

SO-CALLED ABSCESSSES OF THE FRONTAL AND MAXIL-
LARY SINUSES, AND ESPECIALLY ON THE VALUE OF
PERCUSSION AS A MEANS OF DIAGNOSIS, AND THE
PROPER OPERATIVE MEASURES FOR THEIR RELIEF.

(See THE MEDICAL NEWS, August 16, 1884, page 172.)

DR. GARRETSON, who was present by invitation, said that this paper covers the ground so completely that there is little to be added. He would remark, however, that very frequently one can get through the back part of the canine fossa. The best place to make the opening is where the roots of the molar teeth come in contact with the floor of the antrum. In partially dentulous arches, that is, where the teeth have been lost, and there is disease of the antrum, this may not show itself externally, but on running the finger along the part, the bone will be found so thin that it will bend. In one case in which there was no external evidence, he made a cut preparatory to opening the antrum, and at once the knife went into that cavity, the bone being absent.

There is another point regarding alveolar-dental abscesses. They occur at the roots of the teeth, and are in relation with the mucous membrane of the antrum, and may discharge into that cavity. There we have a partial abscess of the antrum, and the bone is denuded of its mucous membrane and imperfectly developed periosteum.

He had been struck with the fact that many cases treated as nasal catarrh are quickly remedied by perforation of the antrum and application of remedies to the antrum. *Vice versa*, there may be nasal trouble which shows itself as antral disease, where, although the antrum is perforated and remedies are applied to its surface, but little benefit may be afforded. There is a very intimate surgical relation between the two parts. It has been his experience that disease of the antrum is quite rare.

DR. R. J. LEVIS said that he had once performed the operation of bringing a thick cord down through the nares and another cord through an incision made above, tying the two together and allowing the patient to wear it for a considerable length of time. The principle is to establish thorough drainage through the normal tract.

In regard to abscess of the antrum, he has made the opening through the maxillary bone above the alveolus. He thought that surgeons have had difficulty in keeping these wounds open so as to keep up thorough drainage. He has been in the habit of keeping them patulous by the use of thick leaden wire. He uses a loop of leaden wire, pressing the loop in as strongly as possible, and allowing the ends to project underneath the cheek, so as to give no inconvenience. He has under treatment two patients, one of whom has been wearing this leaden wire for a number of years, and says that he cannot get along without it.

DR. BRINTON said that as regards the influence of injuries to the infraorbital canal in producing abscess of the antrum, the worst case of antral abscess which he ever saw followed an excision of the infraorbital nerve which he performed some years ago. The abscess followed the operation in a short time, and lasted for a long time.

DR. KEEN, in closing the discussion, remarked that these two cases are the only ones which he had seen, and that the disease is rather rare. He had not the slightest difficulty in keeping the wound open sufficiently to wash the cavity out by passing a small Nélaton catheter. He kept it open until the discharge entirely disappeared, which was in six or seven days.

NECROSIS OF HUMERUS: AMPUTATION AT SHOULDER.

DR. WILLARD presented the specimens; the first being a *humerus* injured by a Minie-ball in 1863, resulting in a slow osteomyelitis, which extended over twenty-one years, and terminated in the invasion of the entire bone, save the articulating surface at the elbow. During this long space of time, there had been alternating periods of discharge, and of closures of sinuses, but fragments of bone had never been seen since the first year after the accident.

When admitted to the wards of the Presbyterian Hospital the man was exceedingly anæmic and broken down, the discharge of pus averaging several ounces daily, and there was dulness on the left apex with slight cough. Soon afterwards he had a severe attack of erysipelas which invaded the whole arm, and still further reduced his strength, the temperature rising to 104.5°. The bone, felt through the various sinuses was denuded and roughened. After full recovery and a thorough tonic course of treatment, an exploratory incision revealed a total necrosis without involucrum, the dead fragments being movable upon each other and threatening complete fracture.

Three weeks later, after putting the patient in the best possible condition, amputation of the shoulder was performed. From the moment of the division of the muscles the shock was most profound, and, rallying powers being wanting, he sank in six hours.

At the operation the glenoid cavity was found diseased, but, owing to the patient's condition, the head of the scapula was not removed. The head of the humerus was entirely denuded of cartilage, a large pus-cavity occupied its interior, and it was only united to the shaft by fibrous bands of inflammatory tissue. The entire upper third of the bone had become divided into several sequestra, but there was no attempt at the formation of new bone. From the upper third to the condyles the surface was partially denuded, and was generally rough-

ened and thickened, showing that no resection save of the complete bone, together with the head of the scapula, would have been of any service.

DR. WILLARD then exhibited the specimens from a case of

LARGE IRREDUCIBLE UMBILICAL HERNIA, WITH STRANGULATION OF A FRESHLY ENTERING LOOP OF INTESTINE,

which particularly illustrated the ease with which a serious trouble may be overlooked.

The patient was a very fat woman, aged seventy-six, who had been in the hospital for months with leg ulcers, accompanying extensive valvular disease. One morning she was noticed to be vomiting as the surgeon passed through the ward, but she complained of no pain and had had a passage from the bowels upon the previous day. An examination of the ulcers showed them to be in a sloughing condition, the granulations being almost gangrenous. The ejected matters were only bilious, and one dose of a quarter grain of morphia and the same of calomel checked even nausea. There was slight fever, but no pain. At the evening visit the resident physician found her quite comfortable, but eliciting the fact of an old umbilical hernia which she had previously concealed from him and all others, he examined it thoroughly but could discover no symptoms of tenderness or pain. During the night without complaint of pain, and without further vomiting, she died.

The hernial tumor was of the size of a large foetal head. The peritoneum was adherent, opaque within the tumor and around the margin of the neck, and the cavity contained a sero-sanguinolent fluid. The contents of the sac, which were irreducible, were mesentery, several feet of small intestines, and a portion of the transverse colon, thoroughly agglutinated and adherent to the walls. In addition to the old contents, a long loop of small intestine had recently entered through the opening, which was about three inches in diameter, and had been so constricted that peritonitis had supervened, as was shown by congestion of the entire tract. At the point of greatest strangulation this redness was intensified almost to blackness, and gangrene would speedily have followed. After death, this loop was reduced with ease, and the constriction could be scarcely discovered.

The left ventricle of the heart was thickened. At the root of the mitral valve was a calcareous ring, almost bony in consistence, surrounding three-fourths of the circumference. The aorta was dilated to twice the normal size.

Lungs healthy; liver enlarged, with some opacity of the capsule of Glisson.

Acini distinct; gall-bladder small; walls thickened, and mucous lining almost destroyed; gall-stones numerous; left kidney enlarged, mottled, and grayish; right, fatty and congested.

The case was of interest, as it showed a strangulation with absence of all of the ordinary symptoms, yet the patient died from the incipient shock of developing peritonitis.

LYMPHOMATA OF THE AXILLA.

DR. FERDINAND H. GROSS exhibited thirteen lymphoid tumors, of various sizes, which he had removed from the left axilla of a female patient, at the German Hospital. The patient was twenty-one years of age.

Her family history furnished no cause for believing that the disease had been inherited; her grandparents had lived to be quite old, and her parents were still living and in good health, as were also her brothers and sisters. She had never been sick until after her arrival in this country, where she has lived about a year, following the occupation of a servant-girl. During the last six months she had been troubled with indigestion and constipation, and when admitted to the hospital was affected with erythema of the left leg. Her temperature was slightly elevated, and the pulse was rapid and weak. The bowels were constipated, and there was loss of appetite. The erythema was of a mild character, and yielded promptly to the use of laxatives and astringent local applications. About five months previously she had had a similar affection of the other leg. In the left axilla there existed a growth, or growths, forming a mass of considerable size. Of this, however, the patient made very little complaint, saying that it did not now cause her any inconvenience, except when she used her arm a good deal—though it had at one time given her some pain. She noticed this enlargement for the first time ten or twelve weeks ago. But, of course, its origin dates farther back, as it had when discovered already attained nearly the size of a hen's egg. The conglomerate mass was now firmly bound down against the thoracic side of the axilla, but in the apex of that space, near the large bloodvessels and nerves, the attachments were less rigid. The tumor, as a whole, imparted a hard, elastic feeling on being manipulated, and was lobulated, but not painful. The mamma was not involved in the disease, and no other glandular enlargements were anywhere discovered.

The patient promptly consented to submit to an operation, and on the twenty-seventh of May, five days ago, she was etherized, and the thirteen tumors here presented were removed. A vertical incision, about four and a half inches in length, was made through the integument and fascia covering the mass, and the dissection continued in this line until the capsule of the first and largest of the growths was reached. After this, there was little use made of the knife, except here and there to open a capsule, or to divide some restricting bands. This done, the enucleation of all the tumors was readily completed with the fingers. The largest in the collection was about the size of a goose's egg, while there are several not larger than hen's eggs, and still others as small as filberts. They had not been fused into one mass by any inflammatory process, and were enucleated one after another. The second one in size was tightly bound under the great pectoral muscle, and extended to the under surface of the collar-bone. The hemorrhage was inconsiderable, and only one small vessel required a ligature. The cavity was thoroughly washed out with a solution of bichloride of mercury, a drainage-tube inserted, and the edges of the wound brought together by sutures. The external dressing was saturated with the antiseptic solution mentioned, and was not disturbed for forty-eight hours. It is now the fifth day after the operation, and the patient is progressing favorably. The wound looks well, and is almost entirely healed. There has been no microscopic examination, but from the general appearances of the tumors, and from the cut surfaces, there is no doubt that they are of a lymphoid character. The larger ones

can hardly be regarded as being simply hyperplastic, but rather neoplastic.

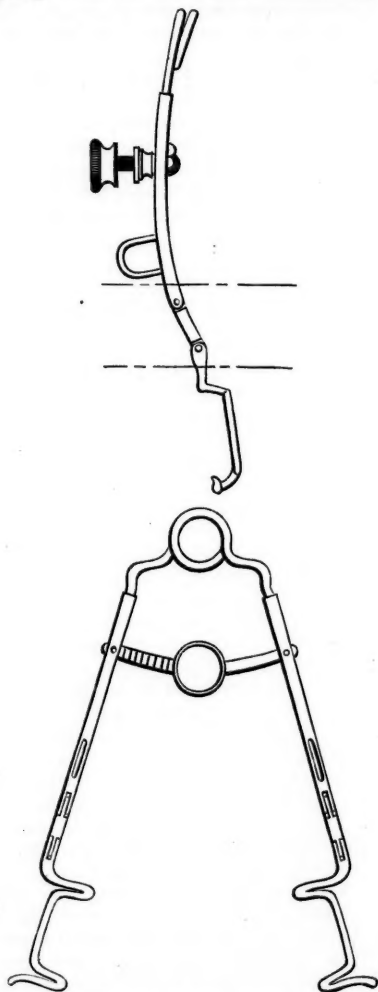
A committee was appointed to make a microscopic examination of the growths.

NEW INVENTIONS.

A MODIFICATION OF THE STOP-SPRING SPECULUM.

BY T. D. MYERS, M.D.,
OF PHILADELPHIA.

FINDING the end of the spring or stop-speculum greatly in the way in ophthalmic surgery, I sought to do away with the inconvenience of the instrument by having a double joint placed between the retractors and the spring. The cut shows the modification, which



enables the operator to depress the end of the speculum out of the way, or even to introduce it on the nasal side, where it will rest on the nose, leaving the temporal side of the eye entirely free to the operator. The instrument was made by Kolbe, of Arch Street.

NEWS ITEMS.

DR. KOCH ON THE CHOLERA AND THE COMMA BACILLUS.—An important conference upon cholera was held in Berlin, at the office of the Imperial Board of Health, on July 26, the proceedings of which appear in full in the *Berliner klinische Wochenschrift*, of August 4, and have been translated in *The Lancet* of August 9. There were present, Drs. v. Bergmann, Coler, Eulenberg, B. Fränkel, Gaffky, Hirsch, Koch, Leyden, S. Neumann, Pistor, Schubert, Skreczka, Struck, Virchow, and Wollfhügel.

The conference had been called at the instance of the Berlin Medical Society, whose President, Prof. Virchow, explained that it was thought advisable Dr. Koch should, in the first instance, give a demonstration of his work before a smaller body than the whole Society, so that the proceedings might be fully reported in the medical press. Before the meeting, Dr. Koch exhibited microscopical specimens and drawings of the cholera bacillus, and demonstrated the method of its preparation and cultivation. The preparations included specimens of choleraic dejections dried on covering-glasses, stained with fuchsin or methyl-blue, and examined with oil immersion, one-twelfth, and Abbe's condenser; also sections of intestine preserved in absolute alcohol, and stained with methyl-blue. There were also cultures in gelatine, etc.

Dr. Koch commenced by remarking that what was required for the prevention of cholera was a scientific basis. Many and diverse views as to its mode of diffusion and infection prevailed, but they furnished no safe ground for prophylaxis. On the one hand, it was held that cholera is a specific disease originating in India; on the other, that it may arise spontaneously in any country, and own no specific cause. One view regards the infection as conveyed only by the patient and his surroundings; the other, that it is spread by merchandise, by healthy individuals, and by atmospheric currents. There is a like discrepancy in the views on the possibility of its diffusion by drinking-water, on the influence of conditions of soil, on the question whether the dejecta contain the poison or not, and on the duration of the incubation period. No progress was possible in combating the disease until these moot-questions of the etiology of cholera are decided. Hitherto, the advances in knowledge upon the etiology of other infective diseases have done little toward the etiology of cholera. These advances have been made within the last ten years, during which time no opportunity—at least not in Europe—has occurred to pursue researches; and in India, where there is abundant material for such research, no one has undertaken the task. The opportunity given by the outbreak of cholera in Egypt, last year, to study the disease before it reached European soil was taken advantage of by various governments, who sent expeditions for the purpose. He had the honor to take part in one of these, and, in accepting it, he well knew the difficulties of the task before him, for hardly anything was known about the cholera poison, or where it should be sought; whether it was to be found only in the intestinal canal, or in the blood, or elsewhere. Nor was it known whether it was of bacterial nature, or fungoid, or an animal parasite—*e. g.*, an

amœba. But other difficulties appeared in an unexpected direction. From the accounts given in text-books, he had imagined that the cholera intestine would show very slight changes, and would be filled with a clear, "rice-water" fluid. He had not fully recollected the conditions met with in post-mortem examinations he had formerly made, and was, therefore, at first surprised to meet with quite a different state of things. For he soon found that, in a large majority of cases, remarkably severe lesions were present in the intestines. In other cases, the changes were slighter, and eventually he met with some which to a certain extent corresponded with the type described in text-books. But it was some time, and after many inspections, before he was enabled to interpret correctly the varied changes met with.

In spite of a most careful examination of all other organs and of the blood, nothing was found to establish the presence of an infective material, and attention was finally concentrated on the intestinal conditions. There were cases in which the lower segment of the small intestine, most marked immediately above the ileo-cæcal valve, extending thence upwards, was of a dark, reddish-brown color, the mucous membrane being covered with superficial hemorrhages. In many cases, the mucous membrane appeared to be superficially necrosed, and covered with diphtheritic patches. The intestinal contents in such cases were not colorless, but consisted of a sanguinolent, ichorous, putrid fluid. Other cases showed a gradual transition to a less marked change. The redness was less intense, and was in patches, whilst in others the injection was limited to the margins of the follicular and Peyerian glands, giving an appearance which is quite peculiar to cholera. In comparatively few cases were the changes so slight as to consist in a somewhat swollen and opaque condition of the superficial layers of the mucous membrane, with delicate rosy-red injection, and some prominence of the solitary follicles and Peyer's patches. In such cases, the intestinal contents were colorless, but resembling meal-soup rather than rice-water. In only a solitary instance were the contents watery and mucoid.

Microscopical examination of the intestine and its contents revealed, especially in the cases where the margins of Peyer's patches were reddened, a considerable invasion of bacteria, occurring partly within the tubular glands, partly between the epithelium and basement membrane, and in some parts deeper still. Then he found cases in which, besides bacteria of one definite and constant form, there were others also accumulated within and around the tubular glands, of various size, some short and thick, others very fine; and he soon concluded that he had to do here with a primary invasion of pathogenic bacilli, which, as it were, prepared the tissues for the entrance of the non-pathogenic forms, just as he had observed in the necrotic, diphtheritic changes in the intestinal mucosa and in typhoid ulcers. Passing to speak of the microscopical characters of the contents of the bowel, Dr. Koch said that, owing to the sanguinolent and putrescent character of these in the cases first examined, no conclusion was arrived at for some time. Thus, he found multitudes of bacteria of various kinds, rendering it impossible to distinguish any special forms; and it was not until he had examined two acute and uncomplicated cases, before hemorrhage had occurred, and where the evacuation had not de-

composed, that he found more abundantly the kind of organism which had been seen so richly in the intestinal mucosa.

He then proceeded to describe the characters of this bacterium. It is smaller than the tubercle bacillus, being only about half or, at most, two-thirds the size of the latter, but much more plump, thicker, and slightly curved. As a rule, the curve is no more than that of a comma (,), but sometimes it assumes a semicircular shape, and he has seen it forming a double curve like an S; these two variations from the normal being suggestive of the junction of two individual bacilli. In cultures, there always appears a remarkably free development of comma-shaped bacilli. These bacilli often grow out to form long threads, not in the manner of anthrax bacilli, nor with a simple undulating form, but assuming the shape of delicate long spirals, a corkscrew shape, reminding one very forcibly of the spirochaete of relapsing fever. Indeed, it would be difficult to distinguish the two if placed side by side. On account of this developmental change, he doubted if the cholera organism should be ranked with bacilli; it is rather a transitional form between the bacillus and the spirillum. Possibly it is a true spirillum, portions of which appear in the comma shape, much as in other spirilla—*e. g.*, spirilla undula, which do not always form complete spirals, but consist only of more or less curved rods. The comma-bacilli thrive well in meat infusion, growing in it with great rapidity. By examining microscopically a drop of this broth-culture, the bacilli are seen in active movement, swarming at the margins of the drop, interspersed with the spiral threads, which are also apparently mobile. They grow also in other fluids—*e. g.*, very abundantly in milk, without coagulating it or changing its appearance. Also in blood-serum they grow very richly. Another good nutrient medium is gelatine, wherein the comma-bacilli form colonies of a perfectly characteristic kind, different from those of any other form of bacteria.

The colony when very young appears as a pale and small spot, not completely spherical, as other bacterial colonies in gelatine are wont to be, but with a more or less irregular protruding or jagged contour. It also very soon takes on a somewhat granular appearance. As the colony increases, the granular character becomes more marked, until it seems to be made up of highly refractile granules, like a mass of particles of glass. In its further growth, the gelatine is liquefied in the vicinity of the colony, which at the same time sinks down deeper into the gelatine mass, and makes a small thread-like excavation in the gelatine, in the centre of which the colony appears as a small white point. This, again, is peculiar; it is never seen, at least so marked, with any other bacterium. And a similar appearance is produced when gelatine is inoculated with a pure culture of this bacillus, the gelatine liquefying at the seat of inoculation, and the small colony continually enlarging; but above it there occurs the excavated spot, like a bubble of air floating over the bacillary colony. It gives the impression that the bacillus growth not only liquefies the gelatine, but causes a rapid evaporation of the fluid so formed. Many bacteria also have the power of so liquefying gelatine with which they are inoculated, but they never produce such an excavation with the bladder-like cavity on the surface.

Another peculiarity was the slowness with which the gelatine liquefied, and the narrow limits of this liquefaction in the case of a gelatine disk. Cultures of the comma-bacillus were also made in Agar-Agar jelly, which is not liquefied by them. On potato, these bacilli grow like those of glanders, forming a grayish-brown layer on the surface.

The comma-bacilli thrive best at temperatures between 30° and 40° C., but they are not very sensitive to low temperatures, their growth not being prevented until 17° or 16° C. is reached. In this respect, they agree with anthrax bacilli. Koch made an experiment to ascertain whether a very low temperature not merely checked their development, but killed them, and subjected the comma-bacilli to a temperature of -10° C. They were then completely frozen, but yet retained vitality, growing in gelatine afterwards.

Other experiments, by excluding air from the gelatine cultures, or placing them under an exhausted bell-jar or in an atmosphere of carbonic acid, went to prove that they required air and oxygen for their growth; but the deprivation did not kill them, since, on removing them from these conditions, they again began to grow. The growth of these bacilli is exceptionally rapid, quickly attaining its height, and after a brief stationary period, as quickly terminating. The dying bacilli lose their shape, sometimes appearing shrivelled, sometimes swollen, and then staining very slightly, or not at all. The special features of their vegetation are best seen when substances which also contain other forms of bacteria are taken—*e. g.*, the intestinal contents of choleraic evacuations mixed with moistened earth, or linen, and kept damp. The comma-bacilli in these conditions multiply with great rapidity, so as far to outnumber the other forms of bacteria, which at first might have been in far greater abundance. This state of affairs does not last long; in two or three days, the comma-bacilli begin to die off, and the other bacteria to multiply. Precisely the same thing takes place in the intestine, where, after the rapid initial vegetation is over, and when exudation of blood occurs into the bowel, the comma-bacilli disappear, and putrefactive bacteria predominate. Whether the occurrence of putrefaction is inimical to the comma-bacilli has not been proved, but, from analogy, it is very probable. At any rate, it is important to know this for certain, for, if it be so, then the comma-bacilli will not thrive in a cesspit, and then further disinfection would be unnecessary. These bacilli thrive best in fluids containing a certain amount of nutriment. Experiments have not yet shown the limits in this respect, but Koch has found them capable of growing in meat-broth diluted ten times.

Again, if the nutrient medium become acid in reaction, their growth is checked, at least, in gelatine and meat infusion; but, singularly enough, they continue to grow on the surface of boiled potato which has become acid, showing that all acids are not equally obnoxious to them. But here, as with other substances which hinder their growth, they do not kill the bacilli. Davaine has shown that iodine is a strong bactericide. He experimented with anthrax bacilli in water to which iodine was added, and the bacilli were destroyed. But practically the organisms have to be dealt with in the alkaline contents of the bowel, or in the blood or fluids of the tissues, where iodine cannot remain in the free

state. Koch found that the addition of an aqueous solution of iodine (1 in 4000) to meat infusion, in the proportion of 1 in 10, did not in the least interfere with the growth of the bacilli in that medium. He did not pursue this line of inquiry, seeing that in practice larger quantities of iodine than that could not be given. Alcohol first checks the development of the comma-bacilli when it is mixed with the nutrient fluid in the proportion of 1 in 10, a degree of concentration which renders it impracticable for treatment. Common salt was added to the extent of 2 per cent., without influencing the growth of the bacilli. Sulphate of iron, in the proportion of 2 per cent., checks this growth, probably by precipitating albuminates from the fluids, and possibly also by its acid reaction; certainly it does not seem to have any specific disinfecting action—*i. e.*, in destroying the bacilli. Indeed, Koch thinks that the admixture of sulphate of iron with fecal matter may arrest putrefaction and really remove what may be the most destructive process to the comma-bacilli. Hence, he would distinguish between substances which merely arrest putrefaction and those which are bactericidal: for the former may simply serve the purpose of preserving the infective virus. Among other substances which prevent the growth of the comma-bacilli may be mentioned: alum, in solutions of the strength 1 in 100; camphor, 1 in 300; carbolic acid, 1 in 400; oil of peppermint, 1 in 2000; sulphate of copper, 1 in 2500 (a remedy much employed, but how much would really be needed merely to hinder the growth of the bacilli in the intestine!); quinine, 1 in 5000; and sublimate, 1 in 100,000.

In contrast with the foregoing measures for preventing the growth of these bacilli is the striking fact that they are readily killed by drying. This fact is proved by merely drying a small drop of material containing the bacilli on a cover-glass, and then placing this over some of the fluid on a glass slide. With anthrax bacilli vitality is retained for nearly a week; whereas, the comma-bacillus appears to be killed in a very short time. Thus it was found that, although vitality was retained—depending largely upon the number of bacilli—for a short time, yet withdrawal of the nutrient fluid for an hour or even less often sufficed; and it never happened that the bacilli retained vitality after a deprivation lasting twenty-four hours.

These results would seem to point to the fact that the comma-bacillus does not, like the organisms of anthrax and vaccinia, pass into the resting state (*Dauerzustand*) by drying; and, if so, it is one of the most important facts in the etiology of cholera. Much, however, remains to be done, especially with regard to the soiled linen of cholera patients being kept in a damp state. He found that in soiled articles, when dried for a time, varying from twenty-four hours and upwards, the comma-bacilli were quite destroyed. Nor was the destruction delayed by placing choleraic excreta in or upon earth, dry or moist, or mixed with stagnant water. In gelatine cultures, the comma-bacilli can be cultivated for six weeks, and also in blood-serum, milk, and potato, where anthrax bacilli rapidly form spores. But a resting state of the comma-bacilli has never been met with—a very exceptional thing in the case of bacilli; and another reason why the organism must be regarded rather as a spirillum than a bacillus. For the spirilla

require only a fluid medium, and do not, like the anthrax bacilli, thrive in the dry state. It is quite unlikely that a resting state of the comma-bacilli will ever be discovered, and, moreover, its absence harmonizes with our knowledge of cholera etiology.

(To be concluded.)

CHOLERA.—The British steamship "Bracadaile," from Calcutta, June 4, and St. Lucia (West Indies), August 16, is en route to New York with reported cholera on board. She lost eighteen out of twenty-eight cases before reaching St. Lucia, and had 651 coolies on board. No apprehension is felt regarding this vessel, as the health officer at New York is on the lookout for her.

RESECTION OF THE PANCREAS AND PYLORUS.—At the meeting of the Gesellschaft der Aerzte, of Vienna, on March 28, Dr. von Hacker presented a woman who had been operated on by PROF. BILLROTH, one month previously, for carcinomatous disease of the pylorus, involving the mesentery, intestine, and pancreas. The adhesions were torn or cut loose, and the affected portion of the pancreas was resected. The patient was quite well when exhibited.—*Wiener med. Wochenschrift*, April 5, 1884.

GASTROSTOMY.—The preliminary operation for gastrostomy was performed, on May 14, by MR. CHARLES McNAMARA, on a woman, *æt.* 51 years, for obstruction of the *œsophagus*. The stomach was opened on the seventh day after the preliminary operation. The patient has thus far made a very good recovery, and can now swallow fluids.—*Lancet*, August 2, 1884.

YELLOW FEVER.—One case of yellow fever has been reported by Passed Assistant Surgeon Guit  ras, of the Marine-Hospital Service, taken from the U. S. steamer "Galena," at Key West. Dr. Guit  ras reports it as a sporadic case, and no danger is anticipated of the disease gaining a foothold at that port.

The cases taken from the schooner "J. Taylor," at Cape Charles Quarantine Station, were decided by Passed Assistant Surgeon Irwin to be Chagres or Panama fever—the death by fever of one of the crew before reaching quarantine was regarded as suspicious.

WHAT IS EXPECTED OF THE WASHINGTON INTERNATIONAL CONGRESS.—Our sprightly London contemporary, *The Medical Times*, says: "It is not to be expected that the Congress at Copenhagen will be as big or as brilliant an affair as the London Congress. To match that, or to 'whip' it, we must wait another three years, until the United States are given an opportunity of showing what they can do at Washington."

DR. OSLER AND THE CHAIR OF CLINICAL MEDICINE IN THE UNIVERSITY OF PENNSYLVANIA.—Our excellent contemporary, *The Canada Medical and Surgical Journal* (Montreal), in referring to the probable appointment of Dr. Osler to the Chair of Clinical Medicine in the University of Pennsylvania, says: "If Dr. Osler should finally accept this appointment, whilst recognizing its appropriateness, we could not but feel that his removal involved a serious loss both to McGill University and to this city."

RESIGNED FROM THE MARINE-HOSPITAL SERVICE.—Passed Assistant Surgeon John C. Fisher, of the U. S. Marine-Hospital Service, has resigned, to take effect September 30. Dr. Fisher was on duty at the Surgeon-General's Office, Washington, for nearly four years, and the service loses a valuable and faithful officer by his resignation.

THE AMERICAN DERMATOLOGICAL ASSOCIATION.—The eighth annual meeting of this Association will be held at Cranston's, on the Hudson, near West Point, on the 27th, 28th, and 29th of the present month. It is expected that the following papers will be read at the meeting:

A Case of General Idiopathic Atrophy of the Skin; A Case of Xanthoma Multiplex; A Case of Sarcoma Cutis (with supplementary account of a case previously reported), by Dr. W. A. Hardaway, of St. Louis.

A Clinical Contribution to the Study of Lupus Erythematosus of the Hand, by Dr. J. Nevins Hyde, of Chicago.

Suggestions Respecting the Treatment of Acne and Acne Rosacea in the Male Subject, by Dr. S. Sherwell, of Brooklyn.

A Case of Unilateral Chromidrosis, Cases of Arsenical Dermatitis, by Dr. James C. White, of Boston.

Dermatitis Herpetiformis: its Relations to Impetigo Herpetiformis, by Dr. L. A. Duhring, of Philadelphia.

On a Peculiar Scaling Affection of the Glans and Prepuce, by Dr. R. W. Taylor, of New York.

On Miliaria and Sudamina, by Dr. A. R. Robinson, of New York.

The Neuropathic Theory of Herpes Zoster. Is it Sustained by Clinical Facts? by Dr. Geo. H. Rohé, of Baltimore.

A Case of Late Cutaneous Syphilis (Acneiform Syphiloderm of the Nose), illustrating the occasional necessity of large doses of potassium iodide. A Case of Vitiligo Involving the whole Surface, by Dr. H. W. Stelwagon, of Philadelphia.

THE CANADA MEDICAL ASSOCIATION will hold its annual meeting on Monday next at Montreal, and an unusually large number of attractive papers is announced.

THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE will meet in the same city on the following Wednesday, August 27.

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE will meet in Philadelphia on September 4, and it is expected that upwards of four hundred of the prominent members of the British Association will be present, including Prof. Flower, of the Royal College of Surgeons, London; Mr. Alfred Godson, of Manchester; Mr. Alfred C. Haddon, Professor of Zoölogy in the Royal College of Science, Dublin; Dr. John McKendrick, Professor of Institutes of Medicine in the University of Glasgow; Mr. H. N. Moseley, Professor of Anatomy in the University of Oxford; and Mr. Lawson Tait, of Birmingham.

THE INTERNATIONAL CONGRESS OF HYGIENE assembled at the Hague on Thursday. Among those an-

nounced to deliver addresses were Dr. Pasteur, of Paris, and Dr. Stephen Smith, of New York.

THE BRITISH MEDICAL ASSOCIATION will hold its annual meeting in 1885 at Cardiff, and Dr. W. T. Edwards, of Cardiff, is the President-elect.

SIR PRESCOTT GARDINER HEWETT, Bart., F.R.S., has been appointed one of Her Majesty's Sergeant-Surgeons in Ordinary, in the place of the late Cæsar Hawkins.

SIR ERASMUS WILSON.—At the meeting of the Royal College of Surgeons, on August 5, the large honorary gold medal was awarded to Sir William James Erasmus Wilson, in recognition of his liberal contributions to the Museum, the Pathological Curatorship, and in the foundation of the professorship with which his name is associated.

NOTES AND QUERIES.

SCHOOL FOR CHILDREN OF DEFECTIVE INTELLECT.

To the Editor of THE MEDICAL NEWS.

SIR: The school for children of slowly developing intellect, alluded to in my letter to *THE MEDICAL NEWS* last fall, was started with two pupils. The results have been so encouraging in these two cases as to lead Miss Bancroft to reopen in the coming fall. She will receive then boarding as well as day pupils. The number of the former will be limited to ten. Her qualifications for such a task are so unusual that I can commend her most unreservedly to the confidence of any who may need such a school for their patients or others. Her address is—Miss Margaret Bancroft, Haddonfield, N. J.

Yours truly,

W. W. KEEN, M.D.

PHILADELPHIA, 1729 CHESTNUT ST.,
August 15, 1884.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM AUGUST 12 TO AUGUST 18, 1884.

BARTHOLF, J. H., *Captain and Assistant Surgeon.*—Relieved from duty at Vancouver Barracks, Washington Territory, and ordered to take station at Portland, Oregon.—*Par. 1, S. O. 114, Headquarters Department of Colorado*, August 1, 1884.

HEIZMANN, C. L., *Captain and Assistant Surgeon.*—Ordered to proceed to Fort Ontario, N. Y., and report for duty.—*Par. 3, S. O. 163, Headquarters Department of the East*, August 13, 1884.

KANE, JOHN J., *Captain and Assistant Surgeon.*—Granted leave of absence for one month.—*Par. 1, S. O. 160, Headquarters Department of the East*, August 10, 1884.

BIRMINGHAM, H. P., *First Lieutenant and Assistant Surgeon.*—Granted one month's leave of absence.—*S. O. 162, Headquarters Department of Missouri*, August 12, 1884.

WOODWARD, J. J., *Major and Surgeon.*—Died August 17, 1884.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.